

224

Notes taken upon Lectures
delivered by
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on Surgery.

Wm. M. Howe, Oct. 13. 63.

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Lecture no. 1.

Excess of nutrition constitutes what is called Hypertrophy. Lack of nutrition is called Atrophy. Inflammation is a perversion of function accompanied by a marked change from a healthy state. Known by heat, swelling, color, pain. "Healthy Inflammation" is that which leaves the part in a healthy state. The red color of an inflamed part is due to an excess of blood as also that of the mucine and in addition it is found that certain vessels contain red corpuscles which in their normal state do not. Acute Inflammation is marked by bright redness. Chronic Inflammation is that of long standing. The temperature of blood in inflammation of the extremities is much higher than it usually is there but

is but very little higher than the temperature of blood at the source of circulation. Neuralgic pain is somewhat relieved by pressure, Infamatory pain is augmented by it.

It has been supposed that in parts inflamed new vessels were formed, but ^{Mr} Hunter's experiment proved that the calibre of the vessels were much augmented. There is also a change in their course and are more tortuous. Swelling used to be considered due to the congestion of the vessels - but it is now believed that it is due to cell action which is increased and draws into the tissue a large amount of liquid. In loose connective tissue swelling is more marked. The cause of this is that there is more room to receive this liquid. Least in the

Glands - or in the Fibrous tissue - the cause of this is that there is little room for an addition of liquid, and thus for the swelling it tight and very painful. On account of the heat attendant on Inflammation it is of called "Inflammatory Fever." This begins usually with a chill the skin when handled shows "goose flesh" proving that the circulation is not perfect not being near the skin. The blood must therefore some where else - where is it? In the internal organs. The tongue is furred and the pulse high ranging from 100 to 120. This disease follows a wound - a wound of the lung is often followed very soon by "Inflammatory Fever." Uncleanliness is a cause of Inflammation, the use of alcohol is stimulus helps Inflammation, as also Constitutional peculiarity predisposing that malady. Serum is the first product of Inflammation - Lymph the second

and Pus the third and last.

Serum and Fibrin are the products of what is known as healthy Inflammation. Serum is never found pure, but is always mixed with lymph and fibrin. Lymph cells are spherical and resemble the colorless corpuscles of the blood.

There are two varieties of Lymph one the fibrillated and the other the corpuscular. Fibrillated Lymph often forms what is called "False membrane". Corpuscular Lymph contains oil globules and tends to thicken. "Healing by the first intention" is reparation by adhesion, and is due to Fibrinous Lymph.

There are certain prophylactic measures which must always be employed in order to keep the inflammation

from outward injuries. Thus under certain circumstances it becomes necessary to exclude all air from a wound or it may be well to elevate a limb when inflammation exists. It serves to drain the blood from the part. But is a very needful measure. By this it is ^{that is} not well to fast, for often the amount of food must be augmented. Thus in suppuration a large amount of aliment is absolutely required. Water dressings are the best applications to inflammation. Flaxseed poultice contains a certain amount of oil which undergoes decomposition and it is therefore in a degree irritant. Warm water dressings are very useful. They are employed when warmth is required. In all these water dressings drugs may be employed in connection with them. such as

opium, liquor, plumbi, sub, acct. ʒss.
Cauterization is often used in m.
du to relieve inflammation. This may
be done by heating an iron in boiling wa-
ter and drawing lines over the part, this
will remove deep seated inflamma-
tion. General treatment consists in
acting upon the various excretories.
This is done by purgatives, diuretics.
Saline cathartics are particularly
useful in surgical treatment. The
same may be said of Woods' Powder
in fact 10 or 15 gr may be used in al-
most every instance. Ammonia
is very useful as a stimulant, par-
ticularly as it does not act upon the
brain. Brandy should not often be
used alone - but must commonly
it should be presented in the
form of milk punch. Muscary
(which used to be considered

specific) should not often be used in surgical inflammation.

The Pus corpuscle is the Fibrin or Lymph corpuscle disintegrated. Pus consists of two parts one is a liquid called "pus serum" the other is granular matter called "pus cells." Healthy pus is perfectly mild & unaromatic, and is tasteless and possesses no smell. The "pus corpuscles" have no specific character. They are always formed by the division of pre-existing cells. Pus is due to the disintegration of Fibrin.

When suppuration goes very far the pus degenerates - then the "pus serum" destroys the pus corpuscles - and becomes watery and acrid, possessing an acid reaction. This pus, which will if introduced into another person so provokes cell action as to produce the same disease is called "specific pus." Abusus are due

to the collection of pus. There are
three circles around every abscess. in
the middle is found pus. which to the
touch feels in a degree, soft. next out
side is a ring which feels hard, this
is due to the exudation into the Tis-
sues of Fibrin. our side of this is a
circle which puts on pressure and
is due to the formation of lymph which
is more fluid than Fibrin and there-
fore is forced easily into the surround-
ing tissue on the touch. You can
discover the presence of an abscess
by the fluctuation of the contained
liquid. this must be done by the touch.
In order to cure an abscess (of) it is first
necessary to diminish inflamma-
tion. the second is to encourage
relaxation, that the abscess may
not be subject to increased in-
flammation. the third is to

free the pus, which must be done by a free opening. the fourth and last means, is to use means to diminish the size of the cavity of the abscess. An abscess should be evacuated early. it should not be left until a quantity of pus had formed, for the destruction of tissue will then be great. as then if it were discharged as an early purulent

A Fistula is track of an abscess or what has been an abscess out of which pus has poured. The cure for them is to cause healthy inflammation. A chronic or cold abscess resembles an acute one only in being a circumscribed collection of pus. An abscess (cold) is often incurred upon a fall, but it is not due to the fall. but is usually consequent upon disease of the bone or some internal

affection. Symptoms of cold abscess are as follows. First a dull heavy pain. Then a hard immovable lump will show itself but at length the abscess will become softer and fluctuating. The pus of the cold abscess is imperfectly formed - watery and of a yellowish green color. There are few signs of inflammation. The walls are thicker and are not as vascular as acute abscesses. Although the interior of the wall a membrane seems to exist, this is nothing but a "false membrane". The tendency to "pointing" of a cold abscess is much slower than that of an acute abscess. A cold abscess should not be evacuated as long as it can be prevented. Else it will cause a Typhoid form in the patient. The air has a very injurious effect upon

one of those abscesses when opened - it makes the pus very fetid and acid. It also forms a chemical combination with the pus making hydrosulphate of ammonia.

Pyemia. This disease is found in persons who have been exposed to the influence of animal or vegetable decomposition - it is caused also by injuries of the bones, especially if the injury occur in the cancellated tissue, or from excessive suppuration. The number of white corpuscles are augmented. and in the veins collect clots or "Thrombi." and absorption of ichor takes place. Symptoms are as follows - Great prostration of the nervous system. Suddenly, after two or three days of severe suppuration or after a sur-

gical operation or after puncture:
in - a heavy chill takes place -
soon after there is a slight react-
ion, and it sometimes happens
this is followed by perspiration -
Then chilly feelings and differ-
ent parts of the body are felt. If
a wound is present the granu-
lations are apt to become light
and flabby, and the pus is watery.
The pulse becomes very weak and
lyphur - constituting what is known
as the "air bubble pulse." The secre-
tions are stopped. The counten-
ance becomes troubled. When
life lingers for some time in this
state, metastatic abscesses are
formed in various parts of the
body - which are not detected un-
til the "post mortem" is made -
There is a peculiar sickening

smell which arises from the skin.
The prognosis of this disease is ex-
ceedingly unfavorable - but few
recover - ^Wichow believes that
near the seat of the wound a throm-
bus or clot of blood collects in a
vein. This clot contains both red
and white corpuscles. This clot
does not suppurate as formerly sup-
posed but according to ^Wichow
the fibrous sheath divide and
show up and resemble pus cor-
puscles then are carried on in
the circulation and that is what
forms metastatic abscess in
remote parts of the body. Treat-
ment. Chalybeates - Tonics and
Stimulants of the latter of these Arnica
Leuc. 6 gr. 3 times a day is the best.
Drill's Punch. When little abscesses
form under the skin they should

be promptly and freely opened. Compression or an application of red hot iron burning the main vein leading near the seat of injury to an eschar are favorite remedies. It is hoped by this treatment the propagation of the blood poisoning may be prevented.

Ulcers. Ulcers may be defined by saying that they are that result of Inflammatory action which induces a breach of continuity. Ulceration is always due to previous inflammatory action. Ulcers are of three varieties. Those which are the result of healthy inflammation those which are the result of unhealthy inflammation and the chronic. The edges of a healthy

ulcers are smooth, uninflamed and unswollen. the granulations and surrounding parts are healthy. The pus - is yellow, free, and un-irritating. Wounds healing by the 2nd intention are good examples of healthy ulcers. These healthy ulcers need very little treatment - but shd. be looked to - and rest should be advised. a cloth wet with muscilage makes a very good application. But the reparative process falls stimulation should be applied. Unhealthy ulcers are inflamed and are painful. The inflammation may be over or under pus - if over it is called irritable - if below it is called the sloughing ulcer. The edges are ragged & are burrowed - and Eczema is often developed in the surrounding parts. Bowels are usually constipated.

puted. Inability to sleep and
bad temper - all these form sym-
toms of unhealthy ulcers. Treat-
ment. Purgings - should first be done.
Mercurial purges are the most
effectual. Plain but good food
should then be prescribed. Then
the local treatment should com-
mence. The best of these is warm
water dressings - if the ulcer is so
irritable that it cannot bear the
application, medicate the water
with a little Laudanum. If
the ulcer spreads, and presents
a phagedenic nature a caustic
should be applied. Dover's Pow-
der should be always used.
This ulcer almost always occurs
on the leg near the ankle and
inside of the leg. Intolent ul-
cers are those which are of long

duration and rest treatment
for some time. The granulations
are often gray. These indolent or
lazy ulcers are not painful. Pres-
sure is always to be applied either
by bandage or plaster. If the part
becomes too warm under the bandage
cool water may be applied. Four pts.
of melted bees wax with one part of
turpentine poured on to the ulcer is
often useful. The heat stimulates &
the wax removes the dirt and old
scab. In order to remove the fétid od.
or an application may be made of
100 pts. of Plaster of Paris - and 1 pt. of Coal
Tar. The toe nail ulcer is sometimes
unwisely supposed to be due to the
ingrowing of the nail. but it is really
consequent upon the rising of the flesh.
The remedy is to force a piece of Patent
Lint between the nail and the toe.

Mortification - (Gangrene either perfect or imperfect.) Imperfect gangrene is properly mortification or gangrene in its earliest stage. Gangrene is used to designate death of the soft parts. When gangrene is circumscribed to a small space it is called a slough - when this takes place in the bone it is known as excoriation. Symptoms. Change of color. partial or total loss of sensibility. loss of temperature. the function of the part is diminished. The difference between Humid and dry gangrene is in the difference of liquid present. The pulse falls and is weak. High color. red urine. Constipation or sometimes diarrhoea exists. The cuticle is elevated and blistered - The line of demarcation is the boundary

between the dead and the living tissue. The line of ulceration is the one which divides the limb. between the living and the dead parts. The Prognosis is various. It is favorable if the "line of ulceration" is promptly formed.

Treatment - develop healthy inflammation in advance of hum. gangrene. This may be done by a blister or by a hot iron - Another good way is to remove the dead part. This may be done by the knife. The living part should not be cut into. but remove all the dead part & wash the part off. Stimuli surround heat and moisture to a part already gangrenized. A Poultice may be applied to the line of ulceration. Apply full dose and Liebig's soup. Give Tonics, and Iron. especially Iron. Ferri. Chlor. Administer Opium freely

^{re} Hospital Gangrene. Consequent up-
on crowding patients in Hospitals.
It is due to a poison now unknown.
which enters the blood. Symptoms.
Depression, weakness, weak pulse.
Wound presents unhealthy inflam-
mation & unhealthy granulations
over the granulations particular-
ly at the edge of the wound is
found a greyish milky film.
The pus if before healthy becomes
very liquid and acrid. As the
sloughing progresses the pain be-
comes sharp. Inflammation
of the Lymphatic glands may be
noticed. The Prognosis depends
very much upon your ability to
remedy the bad atmosphere and
supply good food. Fumigate the
rooms with any of the Cholorio.
Prescribe iron. Expose Bromine

in the room until the smell of it becomes perceptible. Tinct Bromine (XX or LIX qts of it) to Alcohol $\frac{3}{4}$ applied to the sloughing wound is an application lately found to be the best. The dead portions must all be removed and the moisture all taken up by patent lint or blotting paper - then the Bromine must be applied. The patient should be etherized as the application is very painful. Dry Gangrene. The symptoms are very much the same as in the Hospital Gangrene. but there is hardly any moist products. It is a local affection, for the surrounding parts are generally found to be healthy. The cause of it is the plugging up of the artery - perverted nutrition - then fatty degeneration takes place. Amputation should not be resorted to in

this disease. This should only be
resorted to in superficial Gan-
græne. Erysipelas. When it in-
volves the areolar tissue it is call-
ed Flegmonous erysipelas. A chill
is a forerunner of this disease. A
change of the wound may be no-
ticed. The pus becomes acid and
watery. The wound becomes black.
The inflammation of acute Erysip-
elas is very livid. If it occurs
near the head it is apt to be
transferred to the Brain. The
wounds are apt to slough. Ery-
sipelas may end by resolution or
by sloughing. The Prognosis de-
pends upon the situation, extent
habits of the patient. In the ep-
idemic form it is apt to be fatal.
This is a blood disease. Treat-
ment. Begin by giving a smart

purge. and it may be an emetic.
Acetate of Potash - and Finck Finck
Purificative. Tonics. As a local ~~an-~~
~~esthesia~~ treatment mucilage
is a very pleasant treatment.

"Primary shock" is but depression &
is in proportion to the injury causing
the shock. As in most cases the patient
can not swallow it is wrong to put any
thing into the mouth. External applica-
tions such as to place a very large
mustard plaster over the epigastrium
and on the extremities. Apply friction.
Inject into the rectum some stimulant
such as whiskey and water. Turpentine.
salt and water. &c. Wash water into the
face. Tickle. and strike the patient on
the ribs. Call the patient loudly and
use every means to wake him out of
his stupor. Take care that the re-

action is not too strong, if it is
it may be necessary to apply that
of broken ice on the head, or
to prescribe warm foot bath.
After immediately and contin-
uing for some time after the in-
jury the patient will be very
talkative and speak lightly of his
accident. when this is the case
be wary of what is known as
"Insidious Shock". Begin to treat
early as in primary Shock -

A wound is a solution of contin-
uity having an external commu-
nication and caused by di-
rect violence. We may have
union by the "1st. intention" or im-
mune by adhesive inflammation
or union by the 2nd. intention.
The first object, in a wound, is to

arrest hemorrhage and remove the clot. - An artery divided entirely will bleed less than one partially divided -

Modus of arresting hemorrhage - When the blood comes from a great number of small vessels the limb should be elevated - cold should be applied, this may be done by wet cloths but these are apt to wash away the blood clots. ice in bladder is a better application. Ferriels salt is the best application in the Materia Medica. Heat may be used to arrest hemorrhage. The actual cautery is used - but secondary hemorrhage is apt to occur after this application and it is therefore a very uncertain remedy. The tourniquet should be made of the very best material. A bandage should always be wrapped

around the limb with a compress.
This instrument should not be left
on more than two or three hours,
for it will cause inflammation.
A ligature should be of Strong Lad-
dles silk well waxed. In order
to prepare a Surgical sponge it shd.
be placed in a board and ham-
mered in order to break up the cor-
al and lime in it. Then a little
muratic acid diluted in water
enough to prevent it from being an

Gunshot wound. These may be either
incised, punctured, contused or
lacerated. The prognosis of incised
wounds is usually good. They gene-
rally heal by the first intention.
The treatment of incised wounds
is to wash, and remove the clot (un-
less this prevents hemorrhage) and

them coaptate the edges, and prevent too much vascular action. In lacerated wound it is useful to bring the edges of the wound close upon each other. Apply warm water dressings - as they are most effectual in preventing sloughing. All gunshot wounds present evidences of contusion and laceration, hence we may always expect them to slough. Primary hemorrhage from these wounds is very rare. Secondary hemorrhage is common. (Ho. After secondary hemorrhage Traumatic fever is likely to prove fatal. A cornical ball seldom or never splits, nor does it often glance. The minie ball inflicts more injury than a round. The greater the velocity the greater the danger of the wound. A wound occurring from a very swift ball is most apt to primary hemorrhage. from

a slow ball secondary hemorrhage is likely to occur. The wound of entrance is smaller than the ball. The wound of exit is usually larger and more lacerated than the wound of entrance. In searching for a ball the patient should be caused to assume the exact position which he had the moment of receiving the wound. The immediate removal of a ball should always be performed unless the danger of the loss of life is augmented.

The pain of a Gun shot wound is not usually great without some great nerve is injured. The lack of pain at the time of receiving a wound is due to paralysis of the nerves involved. The primary

hemorrhage is usually small. When reaction takes place the wound is usually very painful. The wound then swells. Fistulous orifices are always due to foreign matters, that may be carried in with the ball. The Prognosis in Gunshot wounds should be very guarded. Secondary hemorrhage usually occurs from the sixth to the twentieth day. That it is of it to suppurate at all. This is due to the separation of the clough. The best way of examining a wound is by thrusting in the finger. Water dressing is the most useful one in order to allay inflammation. In a large Hospital however it may not be well to use water dressings. for the large quantity of water will cause moisture in the wards and predisposes Erysipelas and Hospital Gangrene.

At a general rule openings for the
evacuation of pus should be made
transversely to the fibres of the mus-
cle. It is not well to open the ca-
nal of a gunshot wound - "unbridle"
it as it is called. The slough is
seldom separated from a Gunshot
until the 21 day. If Secondary
hemorrhage occur from an artery
apply compressions above the wound
and thrust the finger into the
wound, and find if possible the
artery, and ligate it. if it cannot
be found ligation above the wound
may have to be performed. But
if the hemorrhage can be stopped
by filling the wound by charcoal, &
it may be necessary to saturate
it with Monsell's salt, it is the
best application. Tannic acid
or any styptic may be substituted

for this salt if it is not at hand. As a general rule in Private practice secondary amputation is proper and in Military surgery primary amputation is indicated.

Tetanus. - Is a nervous disorder affecting voluntary muscles but not involuntary. Traumatic tetanus. Symptoms. - A person is wounded - wound does very well for 4 or 5 days. Then it becomes very painful - has a stiffness about the neck has no appetite - sometimes the pain occurs in the belly - the pain in the neck increases - and goes into the muscles of mastication, has a disposition to frown, keeps the mouth closed - next the muscles of deglutition are affected. sometimes the diaphragm is affected - constipation is apt to occur - the mind all the

time is clear. In the next stage the puerperal become more marked. It may be that all the flexor muscles are affected or it may be the extensor or lumbar muscles. Diagnosis. This is generally easy. It may be confused with Hydrophobia but the cause will set our diagnosis right. Prognosis. This is very unfavorable. The cause is unknown. The treatment is prophylactic and palliative. Applying the red hot iron (applied) to the wound when tetanic symptoms show themselves. Great difficulty is found in feeding the patient. Enemas of Beef Essence may be used and purgery can be effected by rubbing the Epigastrium with Camellia Oil. Ether may be inhaled and serve to relax the muscles. Atropin has

been used effectually in this disease.
gr ij or iij to the ~~oz~~ 3 was made and q℥ss
injected into the median line of the neck.

Wounds of particular Regions. - Wounds
of the head. If the periosteum is torn
off the bone is most likely to die - if it
is merely torn up and is replaced the
bone may live. - Wounds of the scalp
are very apt to develop Erysipelas - and
this may be transmitted to the Brain.
Incised wounds of the scalp are very
apt to bleed freely. They usually gasp.
Hemorrhage of the scalp may usually
be stopped by simple compression.
The hair must be shaved for any con-
siderable wound. Incised wounds
of this region must be approximated
but the edges should not be drawn
on to each other. Lead suture may
be used, or ringlass plaster to approx

incise the edges. Wounds of the scalp always suppurate, hence the wound should be kept open. Morphia gr. iij to the ℥ inject qtt X or XII for neuralgia. This is done by the Hypodermic syringe.

The internal table of the skull is sometimes fractured when the exterior one is not. It becomes then very difficult to make a prognosis of wounds of the head, and it should be very guarded until after the 9th. day. Blows, or other injuries of the head are often followed by Abscess of the Sinus. The reason is not known.

Compression. Characterized by depression. loss of the power of deglutition, lies as if dead. Con=

cussion - the hearing is affected, but the patient can generally be aroused by loud calling - the breath is so faint that it can scarcely be recognized - the respiration in compression is strong, slow and snoring - In compression the face is congested and flushed, in concussion it is pale and looks dead - The prognosis in compression should be guarded - for the substance of the brain may be broken up - Until the 12 day one should be particularly guarded - The indication in compression is, to remove the cause of compression - Surgeons are now beginning to doubt the use of trephining in limited depressed wounds of the skull - If compression be due to contusion it will begin to show itself in about 24 hours if it be due to abscess it will not

be evident for a number of days.
Hernia Cerebri - is a protrusion
of the substance of the brain through
a fracture of the skull - It is due
to the formation of an abscess in
the brain and the propagation of
pus, forcing out the true brain
substance. Treatment - Apply
some lint wet in lime water - which
will produce a small eschar -
over this lint apply a small piece
of shut lead which will make
a very little compression - Some
Surgeons tie a string around the
hernia and thus hasten the sep-
aration

Wounds of the Face - Wounds of the
eyebrow are generally superficial
and require but little more than
the approximation of the edges by
a silver suture - These wounds heal

ever sometimes affects the superior
betal nerve and cause neural-
gia, and demand a division
of the trunk. Wounds of the cheek
are often attended with dangerous
hemorrhage. The main duct of the
Parotid gland is sometimes opened &
we have a salivary fistula. The per-
tue dura is sometimes divided caus-
ing Paralysis. Treatment - Allay hem-
orrhage either by ligating the artery, or
by active compression. Burns of pow-
er often give great trouble. The pow-
er discolors the skin. Therefore the
spots should be removed - either at
the time of the injury or after the wound
has healed. A wash of Corrosive Sub-
liment gr v to the ℥i; is

In wounds of the tongue it may be
regarded as always indicated to

approximate the edges even if they be lacerated. If maggots are produced in wounds they may be removed by making a solution of Carbolic acid 1:10 to the β . Turpentine may be employed, or indeed almost any Stimulant. Burns wounds of the neck should not be closed straight out. These wounds never heal by the first intention.

Wounds of the Chest. Empyema is likely to attend either a penetrating or a superficial wound of the chest. On account of the firmness with which the connective tissue is bound to the chest, a person may receive a wound with a bayonet or a dagger that may appear to penetrate the Thoracic cavity that has merely gone around the chest. These form super-

facial wounds of the chest. The air causing Emphysema may either enter the connective from without, or from the wounded lung when there is no external puncture - such as may occur from a piece of broken rib wounding the lung allowing the air to escape into the connective tissue.

A severe blow may lacerate the organs contained in this cavity, by simple contusion when there is no external wound. If the Emphysema be allowed to last the tissue will be so stretched as to prevent circulation and the tissue will slough. In this case the air must be allowed to escape by making minute punctures. It is bad practice to probe a supposed penetrating wound of the chest for in so doing we may penetrate the Pleura previously not injured.

Hæmoptisis is not a sure sign of wound of a wounded lung. In penetrating wounds the lung does not collapse without the wound is as large as the opening of the ^{Glottis} Trachea. Profuse hæmorrhage is not likely to supervene wounds of the Lung. General Pneumonia is not likely to follow a wound without any other disposing cause. Pleurisy is a rare result of a wound of the lung, "per se." Uncomplicated wounds of the Lung usually heal without suppuration. Symptoms of penetrating wounds are deceptive, and there is no one that can be looked upon as conclusive. Complications. Internal hæmorrhage. Symptoms. Paleness. difficult sighing respiration, weakness of pulse. Coughing may be heard in the lungs. ~~Pneumothorax~~ ^{Pneumothorax}.

or corner of the Lung is another Complication. This is a portion of the lung protruding out of the wound. at first this portion of lungs looks healthy, but soon becomes very brown.

If the Surgeon be called early he may push the lung back. Foreign substances driven into the lung, for example a piece of cloth or speculum of rib. This may cause Empyema or Plurisy.

The Prognosis is much influenced by the strength of the patient. Treatment. Dyspnoea may be relieved by external and internal stimulants. The wound must be closed as early as possible. Even if internal hemorrhage occur the wound should be closed. This will increase dyspnoea. If the accumulation of blood becomes so great as to prevent breathing

a little of the blood must be allowed to escape. If the Interlobular artery be ruptured, it must be ligated. An artery of the lung can never be ligated. What then shall we do in profuse hemorrhage of the lung? Bleed! This will bring on faintness, and decrease the force of the circulation and the wound will close and the hemorrhage will stop. As the patient receives administer large doses of arterial sedatives - say Tin. Acet. grt V every half hour. This may prove too prostrating if so we must stimulate. As to the treatment in Pneumothorax - if summoned soon after it has occurred we may be able to reduce the Thorax - otherwise it will slough off - if this begins it must be assisted. Some

strangulate it by a silk thread, &
thus hasten the separation.

Wounds of the Abdomen. Wounds
of this region are very apt to be de-
flected. Putrefaction is apt to suc-
ceed these wounds. Stupifying the
abdomen with flannel wrung out
in very hot water and covered
with oil silk will often prevent
Putrefaction. In restoring a portion
of protruding intestines strangulation
should be resorted to. Bleeding is
unadvisable in Putrefaction following
wounds. The best plan of treat-
ment is the "Opiate." Give no Purga-
tives or Emetics. Gr^{ss} of Morphine
may be given as a dose. This must
be watched. Little food required.

Wounds of the Liver. These are a

very dangerous class of wounds
but are not invariably fatal.
In connection with these wounds
there is most frequently jaundice.
When patients recover there is
nearly almost always Hepatic
abscess -

Wounds of the Spleen
Are very dangerous and are
always fatal. Wounds of
the Bladder. The higher up these
wounds are the less dangerous
they become. Generally there
is bloody urine in connection
with these wounds. The great-
est danger is Peritonitis. In
all these wounds the first in-
dication is to introduce a
catheter and allow the urine
to pass off as fast as it comes
into the Bladder. A Perineal
fistula is made by the passing

of urine through the wound. The indication is to keep a Catheter continually in it, and stimulate the edges of the wound. Wounds of the Corpus Cavernosum are usually attended with severe hemorrhage. In wounds of the Penis it is necessary to keep a Catheter in the urethra. In wounds of the Scrotum in which it is distended with urine it becomes necessary to puncture the scrotum in a number of places allowing the escape of the urine. Wounds of the Buttock are frequently the cause of very troublesome hemorrhage. Wounds of the Stomach - are very dangerous but not always fatal. The indication is to close the wound and fasten the edge of the laceration of the Stomach to the parietes of

The Abdomen - Wounds of the Intestine. The indication is to close the wound. Use opium until the patient is completely under it - this must be continued, in an enema, for 15 days. If the ligature is loose remove it, but never take it away before the 5th or 7th day. Sometimes there will be an intestinal fistula, if this occur it becomes necessary to stimulate the walls of the fistula.

Fractures. Fracture may be defined as a solution of continuity in the bone, the result of mechanical violence. Varieties - Simple, Compound, Complicated, Longitudinal - Transverse, Radiated, Depressed - Oblique,

Continued. Varieties of deformity.
Longitudinal. Deformity by rotation. Shortening and angular displacement. Impacted. From the action of the muscles the setting will often be displaced. Age influences the Prognosis very materially. The Endosteum and Periosteum is necessarily fractured in every broken bone. The first stage in the healing after fracture lasts some 4 days, and is marked by swelling. The second stage lasts some 3 or 4 days, and is one of apparent inaction. The third stage or formative or Healing stage lasts some ten or twelve days. The fourth stage is the Hardening period, and the time is indefinite. The length of time for which a fractured bone should be inactive differs in dif-

green bones. In the Clavicle usually 5 weeks. For the Humerus 8 weeks. For the bones of the leg 8 weeks. For the Femur 12 weeks. Some bones never unite by Callus. The neck of the Femur, the Patella, the Cranium. Treatment after fracture. First remove the patient carefully from the seat of fracture. Next reduce, or set the fracture. Retain the bone in the proper position. Attention must be paid to the patient's bladder for it is not infrequent that persons suffering from fracture are not able to pass water. The diet of the patient should be looked to. Nutrition diet should be used. Dr. Smith does not believe in the exhibition of Phosphate of Lime. Purgatives

should not be administered without arrangements are made for evacuation without the slightest movement of the patient.

Line for the Ligation of Arteries.
Primitive Carotid

Line high up. From sternal end of Clavicle to Mastoid process. Sterno Clavicular Mastoid Muscle. Muscle of Reference Sterno Clavicular Mastoid.

Line Low down. Same line - outer edge of Sternus Thyroid. Tubercle of transverse process of 6th Cervical is in front and a little inside the artery. In the Sheath. Carotid artery. Vagus nerve & Internal Jugular vein. The Brachial Nerve is on the front and outside of the Sheath.

Lingual Artery

Inferior $\frac{1}{2}$ inches from greater cornu
lines

of the Hyoid bone parallel with
the greater Cornu. The Hypo Glossal
Nerve is just above. Reference
Tendon of the digastric muscle.

Facial Artery—

Line. Incised $1\frac{1}{4}$ inch oblique from the
inferior edge of the Masseter mus-
cle to the angle of the mouth—

Temporal Artery

Line Over the root of the Zygomatic
process two lines in advance
of the ear.

Sub-Clavian Artery—

Line. Parallel with Clavicle, or
perpendicular line from apex of
the Armo-Clavicular Triangle, or
Supra-Clavicular Fossa— Mus-
cle of Reference. Scalenus Anticus.
inserted into the tubercle of the
first rib.

Axillary Artery—

Line. $\frac{3}{4}$ of an inch from anterior border of

Axilla, or junction of its anterior & middle third. Muscle of Reference. Coraco Brachialis. In the sheath. Axillary vein. Median ~~vein~~ ^{nerve}. Inter-
nal cutaneous artery. Ulnar and Radial nerves - counting from Coraco brachialis.

Brachial Artery

Line. From junction of anterior & middle of Axilla to point inside the tendon of the Biceps at elbow. Ref-
erence. Inner edge of Biceps mus-
cle at the middle of the arm. Cor-
aco brachialis high up. Median
nerve next to Muscle.

Radial Artery

Line. For upper third. From $\frac{1}{2}$ inch outside the middle of the bend of the arm to a point on the outer side of the forearm $\frac{1}{2}$ inches lower. Muscle of Reference. Inter-mus-
cular space between Supinator

Radii Linguae. & Pronator Radii
terres. inner edge of Supinator.
Line for lower third. From same
point at elbow to the inner edge
of the Styloid process of Radius.
Muscle of Reference. Outer Side of
tendon of the Flexor Carpi Radialis.
Ulna Anterior

Line. From Internal Condyle to
Radial side of Pisiform bone. or from
inner edge of the tendon of the Biceps
to the junction of upper and mid-
dle third of Ulna and thence to
Pisiform bone. Muscle of Reference
At middle third Junction of
Flexor Carpi Ulnaris & Flexor Sub-
limis or first Intermuscular
space outside the free margin
of the Ulna. At wrist. Exter-
nal border of ^{tendon of} Flexor Carpi Ulnaris.
Ulna move on inner side and
a little behind.

Primitive Iliac Artery

Line. Parallel with and $\frac{1}{2}$ inch above Poupart's ligament. from Ext. Abdominal ring to 1-2 inches above crest of the Ilium. Stretch the connective tissue between Peritoneum & fascia.

External Iliac Artery

Line. From $\frac{1}{2}$ inch from Anterior Superior Spinous process transversely towards External column of the External Abdominal ring - being on its inner side. Be careful not to injure the Peritoneum -

Femoral Artery

Line. From middle of Coracoclavicular arch to posterior & internal part of condyle of Femur. For upper part. Scapular Triangle. Middle third. Inner edge of Sartorius. Muscle of Reference. Sartorius muscle vein inner side of artery -

Posterior Tibial Artery.

Line From middle of Popliteal space to foot, half way between the Internal Malleolus & Tendo Achillis.

Muscle of Reference. High up -

Inner edge of Soleus. Low down -

Tendon of the. Flexor profunda - &
Tibialis posterior

Anterior Tibial Artery.

Line - On the foot, from middle of space between head of Fibula & spin of Tibia. to the middle of the Malleolar space. Muscle of

Reference. Tendon of ~~Extensor~~

~~Pericubitus~~ Extensor communis, outer side of tendon of Extensor Proprius Pollicis. On leg - Same line -

Muscle of Reference. Tibialis anterior, or first intermuscular or tendinous interspace from spin of Tibia -

Fractures. In a fracture of the Clavicle the indications are to raise the shoulder up, throw it back and pull it outward. This last may be done by placing a pad in the axilla which will act as a fulcrum. In a fracture of the neck of the Humerus it is indicated to put an angular splint on the front of the arm, and a flat one to the back and outside of the arm, and a pad in the axilla. In a fracture of the length of the bone it is indicated to make extension and counter extension, and apply an angular splint in order to keep the elbow at rest, and two small splints to the Humerus, no pad in the axilla. The fracture of the condyles of the Humerus is usually caused by direct violence. The spiral of the upper extremity must

be applied - and the arm is to be allowed to lie on a pillow until tumefaction has ceased - and then an angular Splint must be very carefully padded and applied - This angle must be changed at very dressing in order to prevent abnormal adhesions - Fracture of the Humerus is usually caused by direct violence - Fractures of the bones of the forearm impair the usefulness of the hand - There is little tendency to shortening even in fractures of both bones of the forearm and none whatever in fractures of only one bone - The splints used for this fracture should be wider than both bones of the forearm, and long enough to reach to the ends of the fingers - These splints must

be padded wider in the middle than at the sides. At the end of 3 weeks the arm may be carefully pronated and supinated, in order that the callus may not interfere with their movements. "Barton's Fracture" commences in the articulation of the Radius & extends upwards. A bursa in the front of the wrist generally becomes much enlarged and hardened and often makes the Barton fracture appear to be a mere luxation. We must resist the influence of the extensors, next we resist the abductors of the Thumb. The Patella may be fractured in two ways, transversely and vertically. The transverse fracture is usually caused by excessive muscular action. The vertical fracture is generally in consequence of direct force.

In fractures of this bone, we must
elevate the whole lower extremity
and keep the limb straight -
In Fractures of the Body of the Pelvis
we have little or no displacement,
and indeed we have little dis-
placement in any fracture of
the Pelvis - little need be done other
than to insure rest in bed, and
attention to the rectum and Bladder,
and proper attention to inflam-
mation. Fracture of the neck
of the Femur is not uncommon
especially in the aged. In or-
der to make the diagnosis in this
injury - the limb should be cir-
cumducted and the other hand
applied to the great trochanter will
discover that it describes a very
small arc - the limb may be
extended and if it is a fracture
it will fly back and be as

short as before - This is not the case when it is a luxation. One of the most certain signs of this injury is the very great pain caused by the Surgeon's manipulations much greater than in a mere luxation - The union between the parts in this fracture is usually fibro ligamentous. The Prognosis should be very guarded. Very little more is done in this fracture than to flex the thigh. The double inclined plane may be employed when the fracture is high up in the length of the bone. The straight splint is the best in fractures of the length of the bone. If we only have one bone broken in the leg there is but little displacement or shortening. Fractures of both bones of the leg when caused by direct violence is

apt to be at the same place
in both bones. And if not
caused by direct force the re-
union is true. A fracture
high up in the Tibia is apt to
injure the artery - which at
this place perforate the Inter-
osseous membrane - for this
reason gangrene sometimes
follows this injury. In
treating fractures of the Tibia
we should first prevent re-
laxation of the limb, and second,
by counter the disposing of
the part.

Indications Reduce the dislocation
as soon as possible. - And by
Recort to some means that will
insure the retention of the bone
in the proper position.

3rdly. Combat the excessive inflammation. 4thly. Prevent Ankylosis.
We may have four dislocations in the Hip Joint. One upward and backward - one downward and backward - one upward and forward - one downward & forward. The upward and backward is the most common variety. In this luxation we have shortening some $1\frac{1}{2}$ or 2 inches. In the backward dislocations the toes are turned inwards or have a tendency to do so. In the forward dislocations the reverse is true. In the upward and backward luxation the main muscles to overcome are the rotatory.

Coxalgia. Hip disease. Most common in the young. Caused

The Scrofulous or Tuberculous
diathesis. It is also caused by
various trifling circumstan-
ces - such as over exertion -
Movement gives pain - The
joint will be particularly
painful in the morning -
Sometimes Sometimes the
child refers the pain to the
ankle - this may mislead
the Surgeon. The particular
position of the limb will
stretch the Internal Lateral
Ligament of the Knee joint
and this fact explains the
cause of the pain referred to
in this joint. The back of
the Thigh can not touch the
bed at the same time. This
is a very valuable diag-
nostic sign. After Atrophy
has taken place in the Os

the muscles the buttocks will
become flattened. At length
the parts about the hip become
studded and shining and
fluctuation may be felt, giv-
ing evidence of abscess. The
fever supervenes - which is
well marked. The discharge
is Ichorous. Treatment -

Prophylactic measures. Vi-
tunes. In the first stage
leaps or leeches should not
be applied, but this does
not hold good in the sec-
ond stage. Cod Liver oil.
The application of Dover's
Splint.

Diseases of the Genito Urinary
Organs. Dysphidromatosis of
the mucous membranes of
these organs is called Gon

nerve - Inflammation
going on to ulceration is
called Syphilis. Prophylac-
tic Treatment "Keep out of
the way of temptation".

Urethra immediately after
connection. Perform ablu-
tions. Sheaths give but a false
security. Saline and p-
caustic may be introduced
into the urethra, or if this
be not at hand, we may
inject a solution of the Nit.
salt of Silver &c. but these
remedies should not be
used when much Inflam-
mation be present. It is
not well to begin treat-
ment in this way if the
patient be not presented
within 48 hours after con-
nection. A very soothing

injection is the following

~~Agua~~ ^{and} Camph gr II

Agua pt I

Yolk of one Egg-

M - S. inject -

patient must be employed
and the bowels kept open.

In the Inflammatory Stage
a hip bath should be given.

An injection of the Balsam of
Copamba is very beneficial.

In order to prevent Cordis we
administer Opium - or Camphor
or we may combine the two.

Epididymitis when it occurs
usually comes on in about
Two Weeks, when it begins the
proper treatment is to
apply leeches - if further
developed we should put
leeches on the line of the cord -
compress the whole scrotum

Phymosis

by adhesive strips - Paraphimosis and Phymosis are sequelae of Gonorrhoea. The treatment of Phymosis is to slit up the prepuce at the junction on a director. Stricture of the Urethra is another sequelae. This must be treated by the introducing of different sized Bougies - this must be done every few days for some time. Warts another sequel of Gonorrhoea should may be treated, if small by snipping them off and touching the bleeding portion with Argent Nit. If the warts are extensive they may be washed by a camel's hair pencil and very slightly with

Nitric Acid - it must then
be washed off with an
alkaline ^{solution} ~~solution~~. This will
dry up the wart.

Chancre. A disease caused
by the introduction under the
skin of an ichorous irritating
pus, which forms an ulcer
which ulcer may be of two
kinds - either Soft or Hard.
The difference between
a soft and hard Chancre is
that the first is caused by
a comparatively mild virus.
while the latter, or hard Chan-
cre is caused by a highly devel-
oped and extremely virulent
virus. Gonorrhoeal pus will
not produce Chancres.
Treatment - If seen when there
is a pustule it must be

strangulation of the piles
by the wire ligature and
the double cannula is the
best operation. Dr. Emmet
has only known of one in-
stance in which the piles
returned after having been
operated upon in this
way. That was an in-
stance of a relative of Gen
Scott, who was obliged to
be in the saddle for many
hours together during the
Mexican Campaign.

Deformities. *Pes Equinus.*
Where the toes are turned
downwards. This is always
connected with band which
is the turning in of the
toes. *Pes Talis* or the
turning up of the toes is

always combined with Val-
gus. or the turning out of the
toes. Treatment. Restore
the proper position as soon
as possible, and assist in
the development of the mus-
cle of the weak side. It is
well to soak the feet in a so-
lution of Oak Bark - in order
to make the skin hard so that
it may not chafe from the
use of the proper instruments.

Curvature of the Spine. Latras.
Most common in girls. In
making examination of per-
sons suspected to have this
disease - note the relative
heights of the shoulders. Lat-
ras curvature is purely a
muscular disease and
is always unconnected

with disease of the bone -
Treatment. Increase
the development of the
muscles on the weak
side

Diseases of the eye. We may
know conjunctivitis from
Dacryoditis by the differ-
ent distribution of the
vessels in the parts. In
conjunctivitis the vessels
are seen to anastomose.
The vessels in the Sclerot-
ica do not anastomose
and are straight. Oph-
thalmia is a serious infil-
tration in the sub mucous
cellular tissue of the eye.
Scrophulous conjunctivitis.
Should be treated with
applications of Argent

Nit. gr $\frac{ij}{\text{ss}}$ to the ℥i. Cod Liver
oil. Iron. Tonics - Sun-
shine - Exercise -

Puerile Ophthalmia - Occurs
in children but usually
born. Locumunt Argent.

Nit. gr $\frac{ij}{\text{ss}}$ or $\frac{iv}{\text{ss}}$ to the ℥i -
Gonorrhoeal Ophthalmia.
Treatment. Evert the lid
wash it clean. Paint the
lid with Argem Nit.
gr $\frac{vi}{\text{ss}}$ to $\frac{vij}{\text{ss}}$ to the ℥i -

Eclerotic. Seldom exists
without conjunctivitis.
causes such as those which
would cause Rheumatism.
Locumunt. Purgatives.
Doan's Powder. Counter
irritation.

Cornitis. Inflammation of

the cornea causes a
reduction in the trans-
parency of the part.

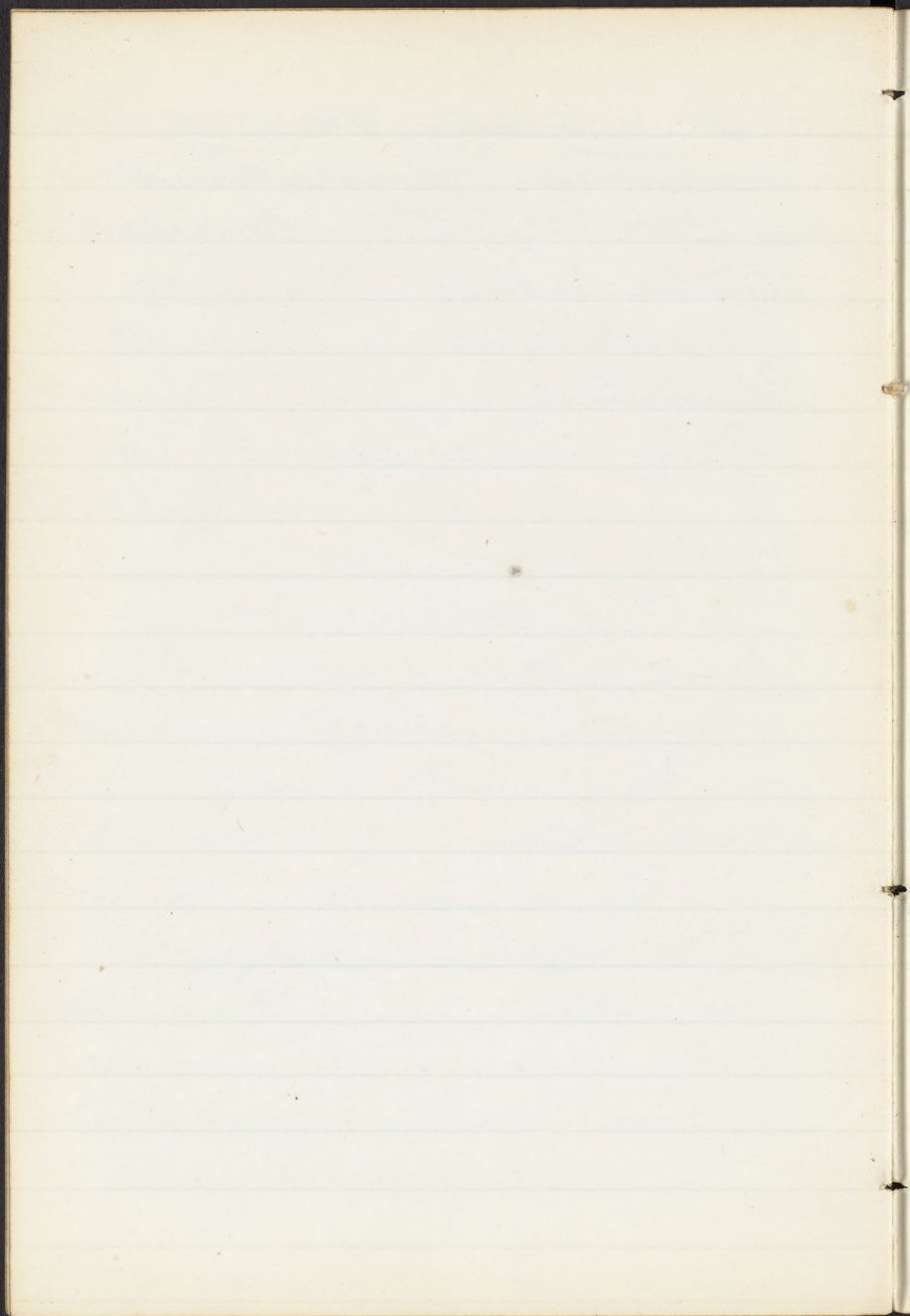
Treatment. Apply to the
ulcer, with a fine camel's
hair pencil, a solution
of the Nitrate of Silver $\text{Gr } \frac{1}{2}$
to the ℥ss.

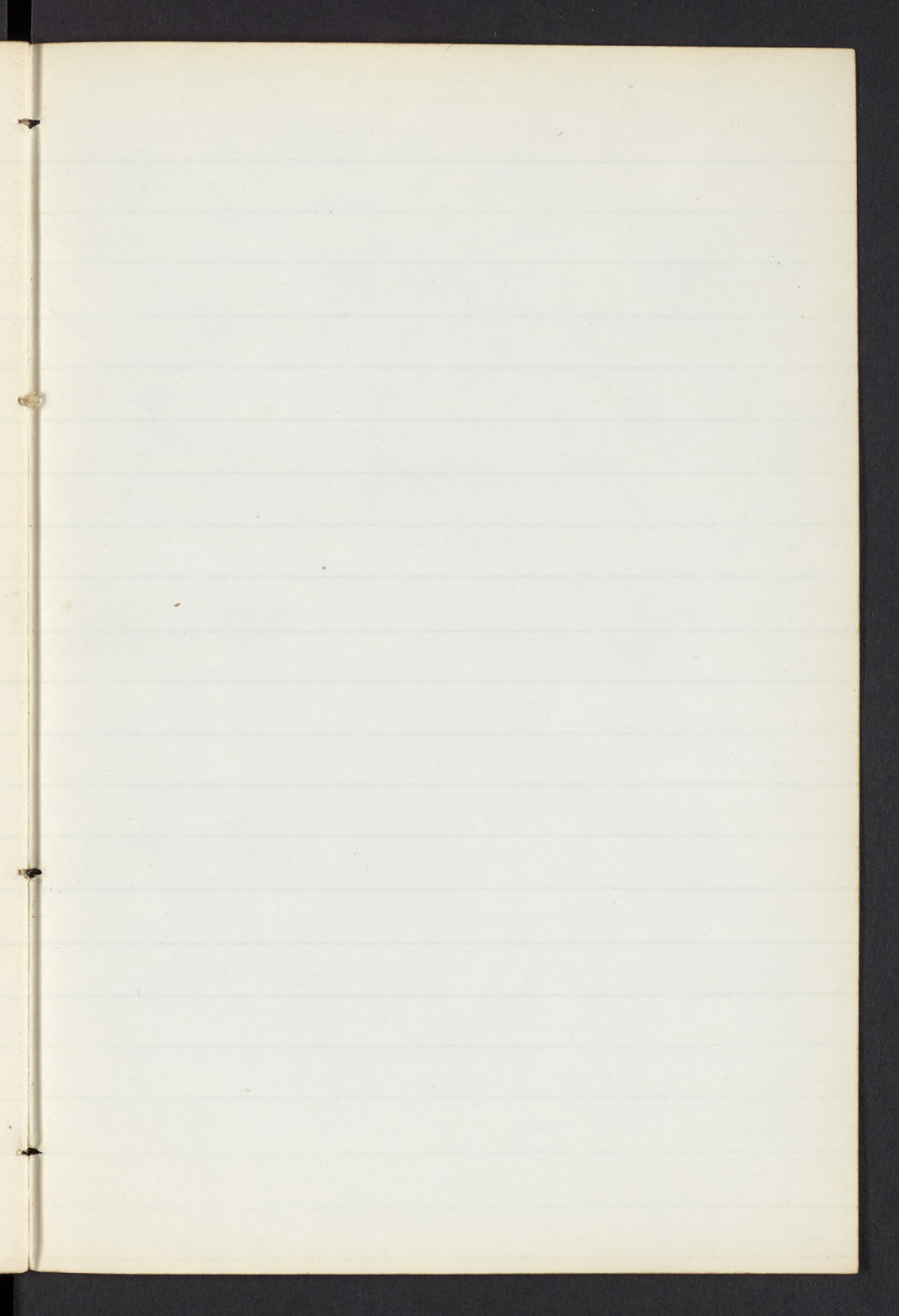
Sym. Increased vascular-
ity - change of color
the eye becomes dark
red - Great Pain - In-
tolerance of light - Tumor
round - Dilate the Pupil
by Atropia - Caps to
the back of the neck - Pur-
gatives. No occasion for
the specific influence
of mercurials.

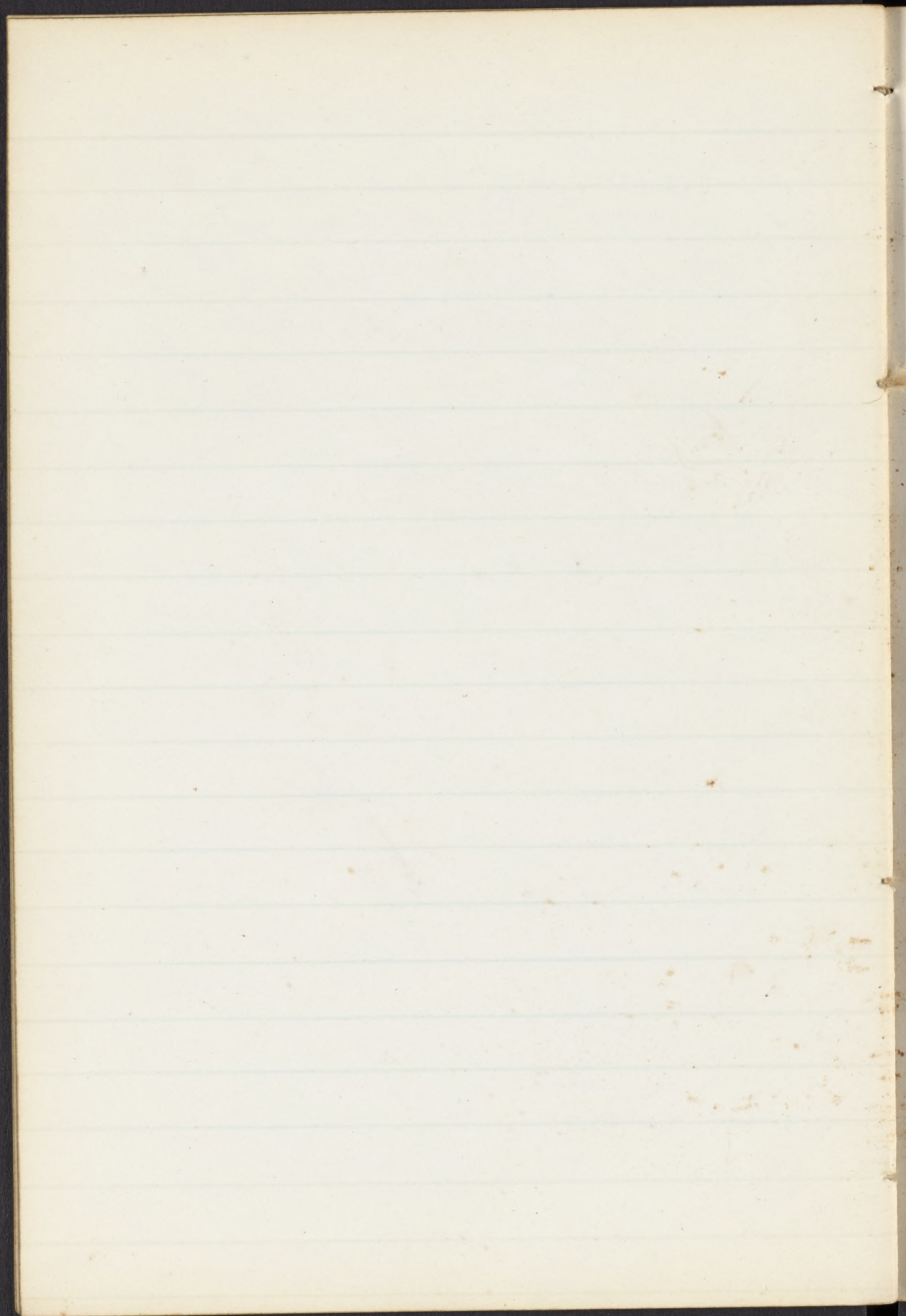
Choroiditis. The choroid

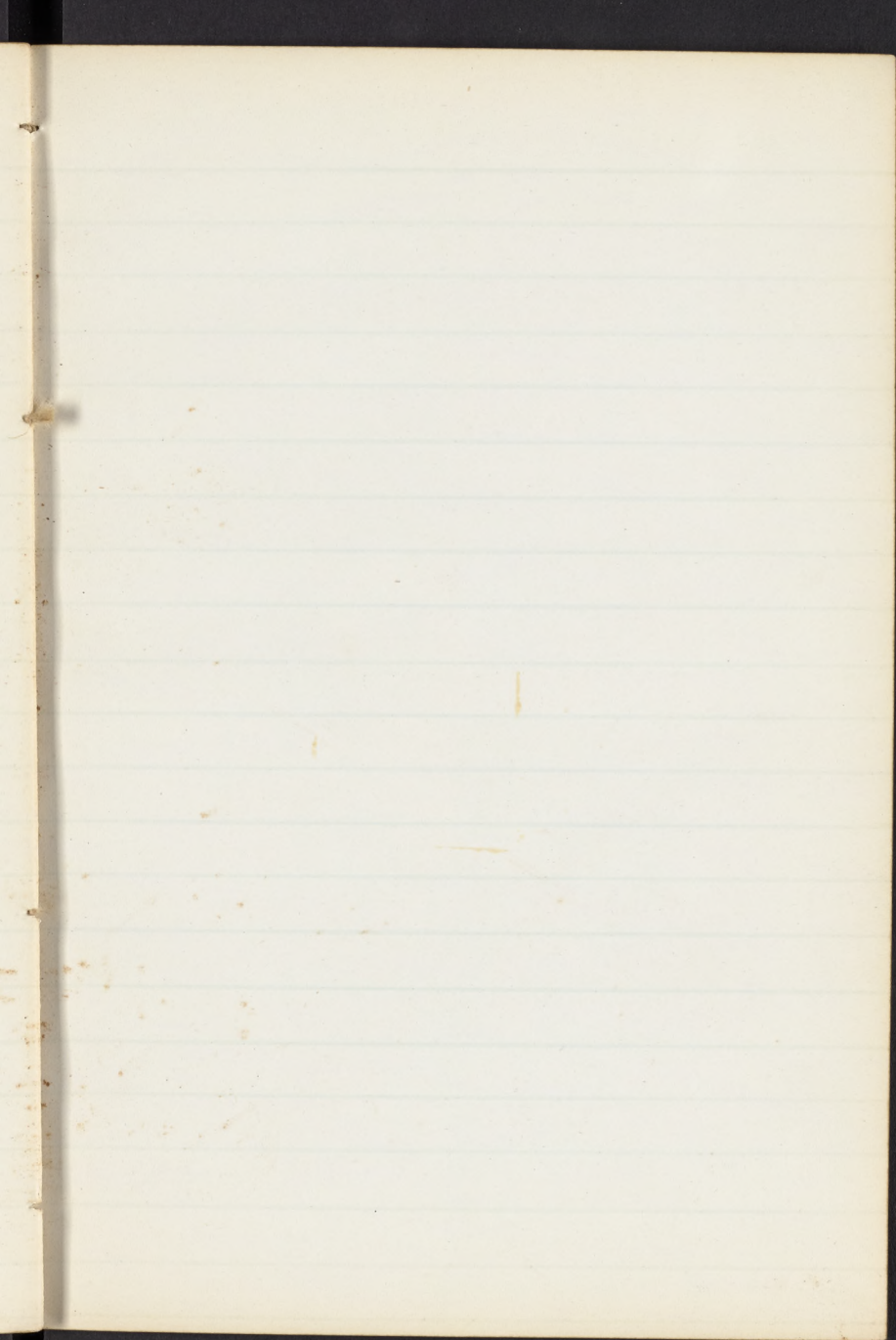
coat is very vascular.
Locatimus - Serratus
Antiphlogistic Serratus
stimulant.

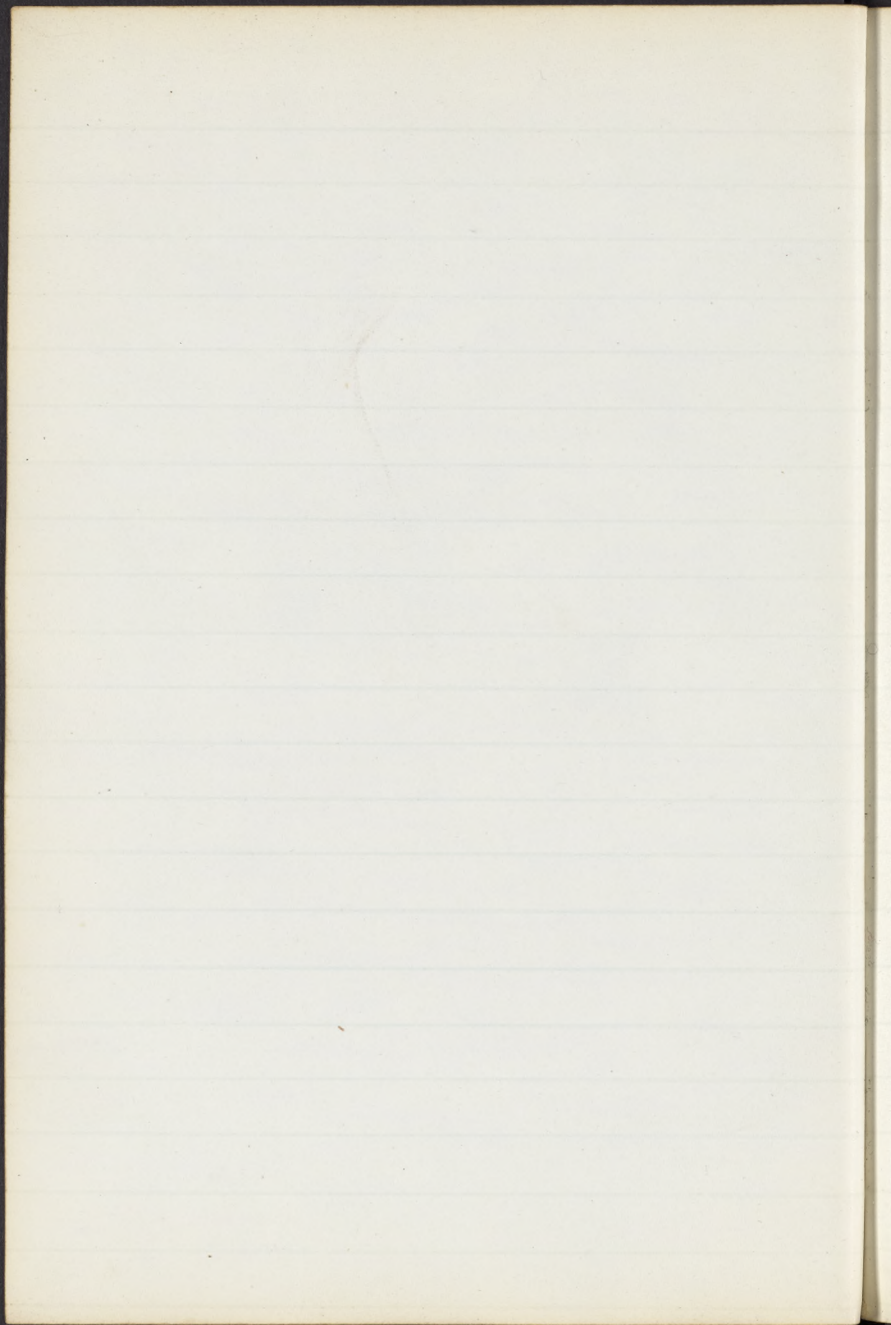
Glaucema -

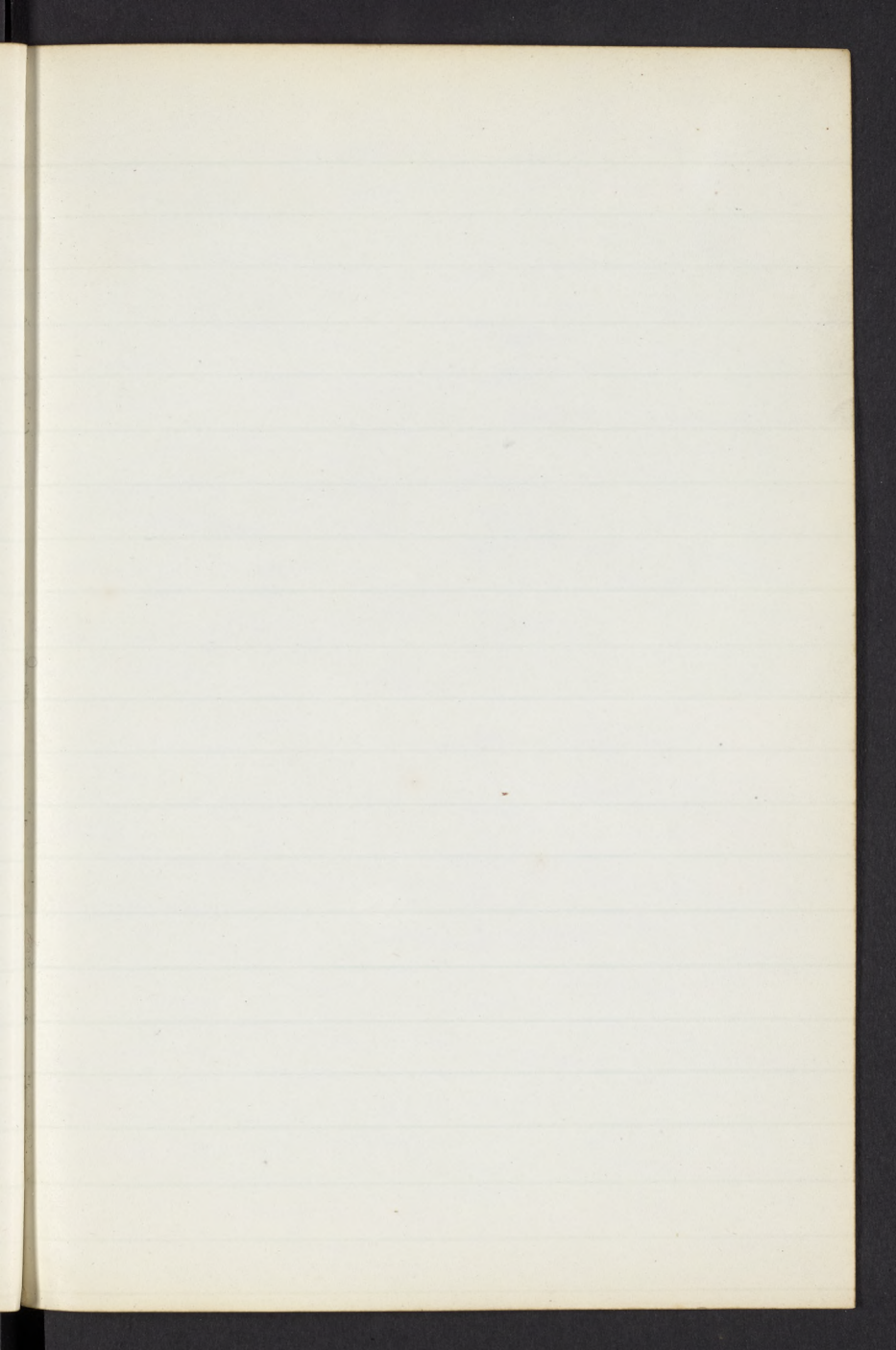


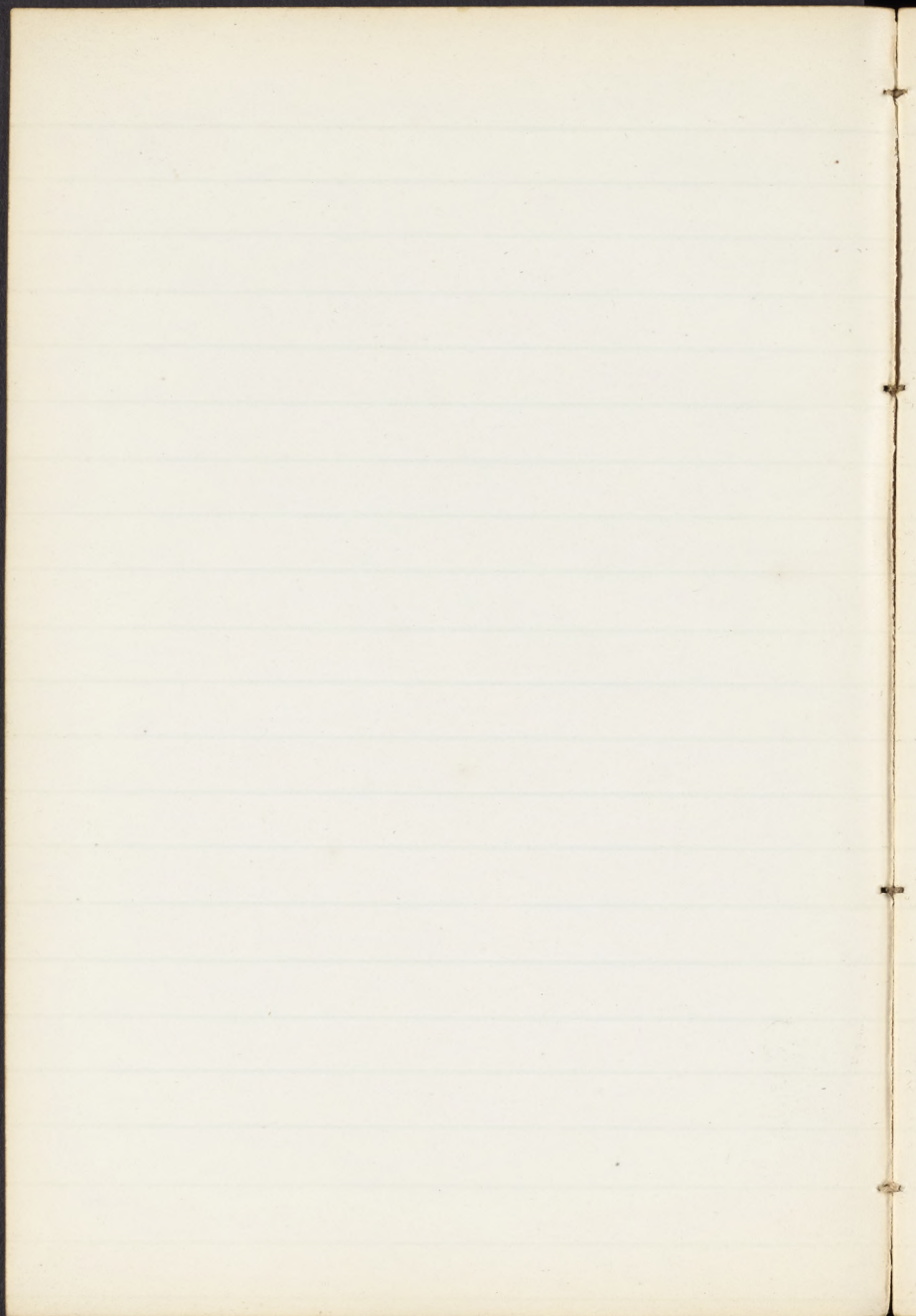


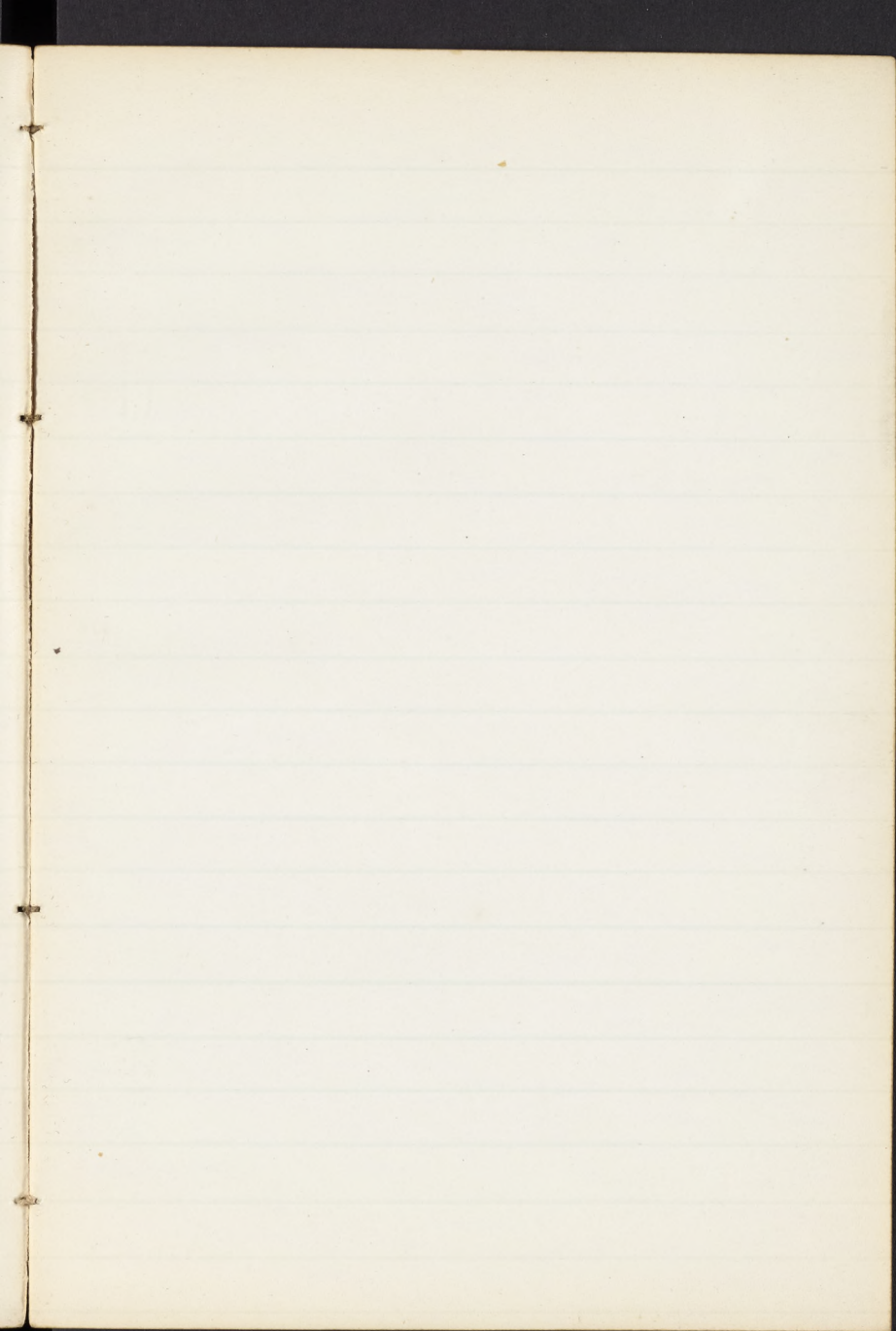


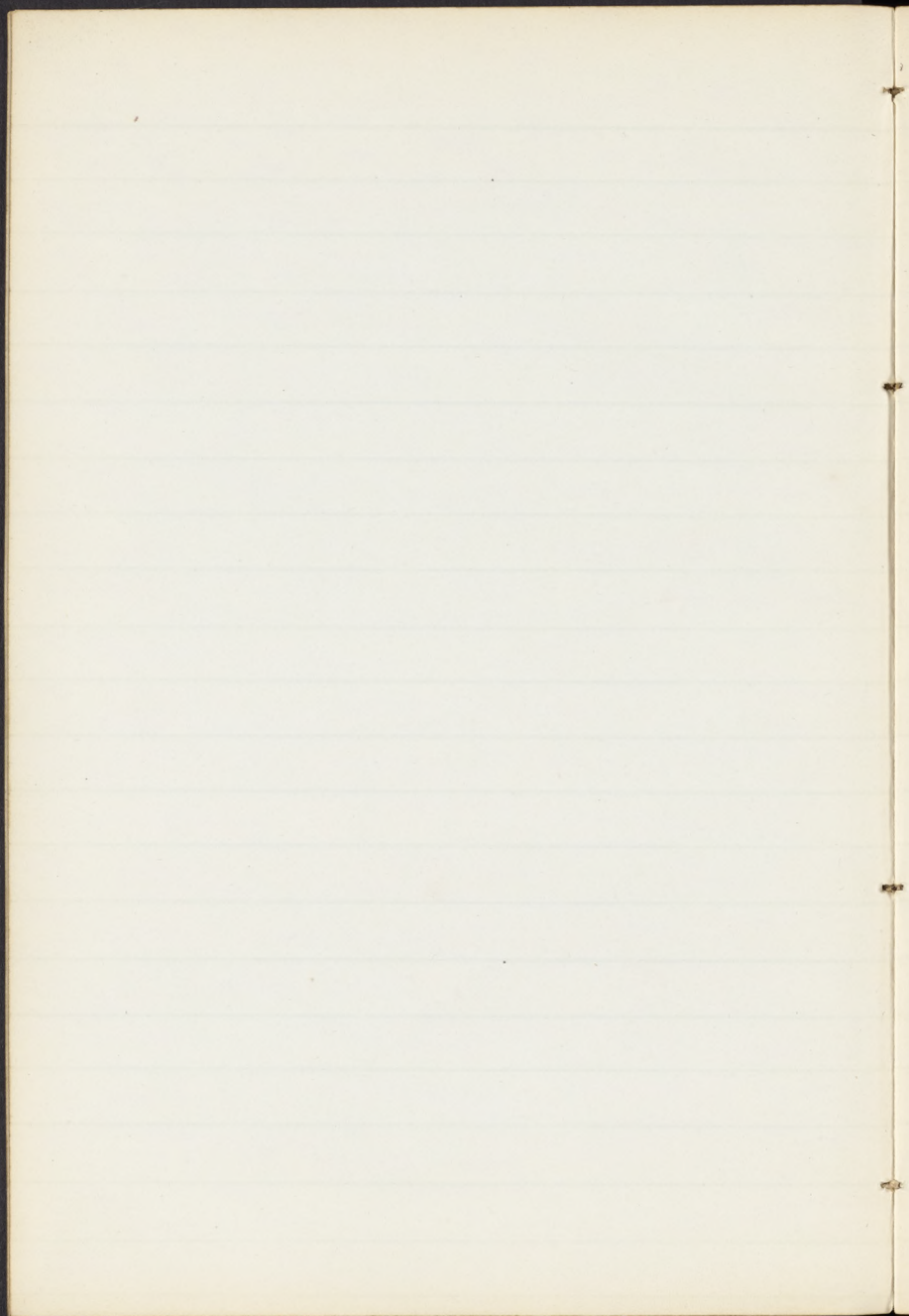


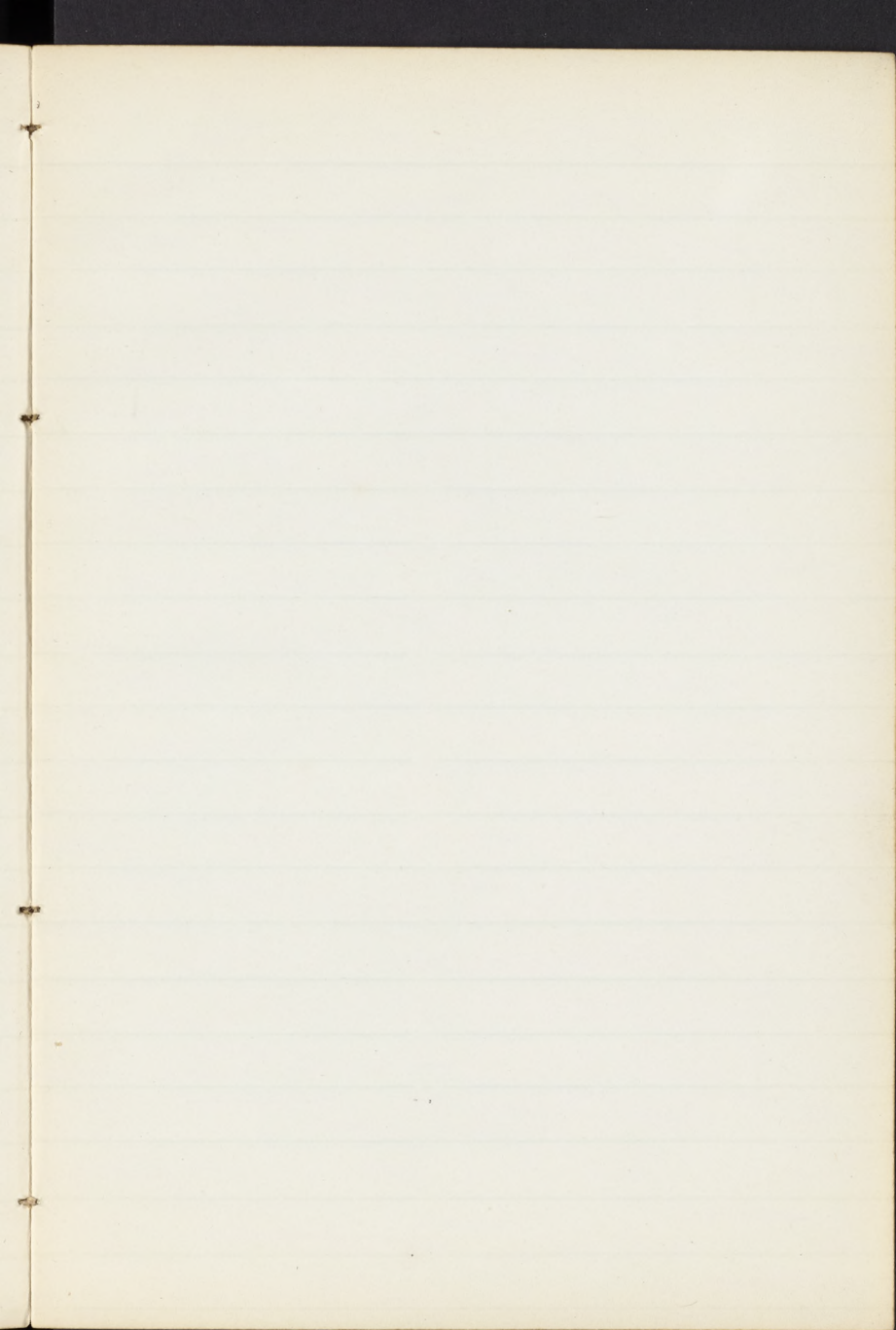


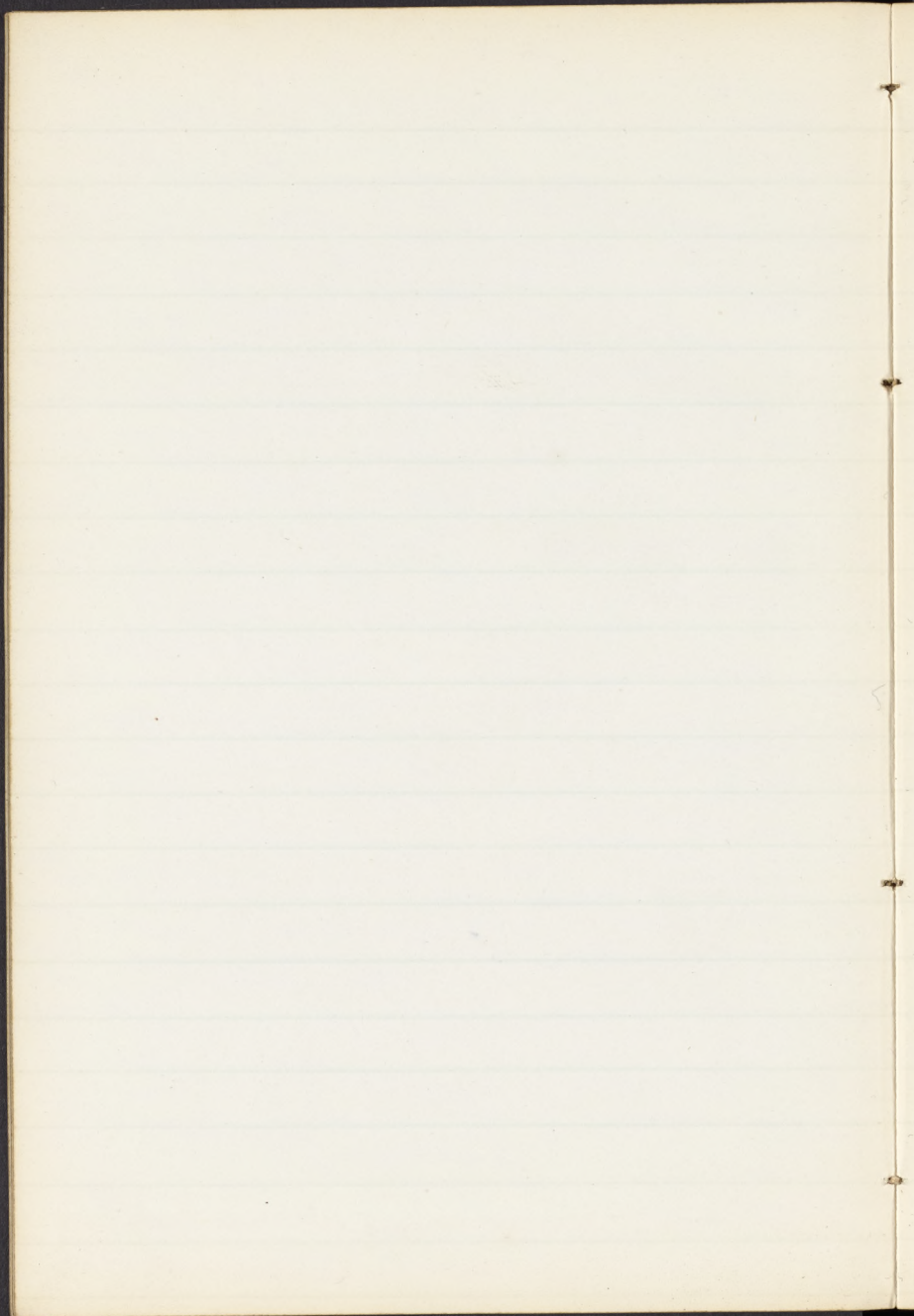


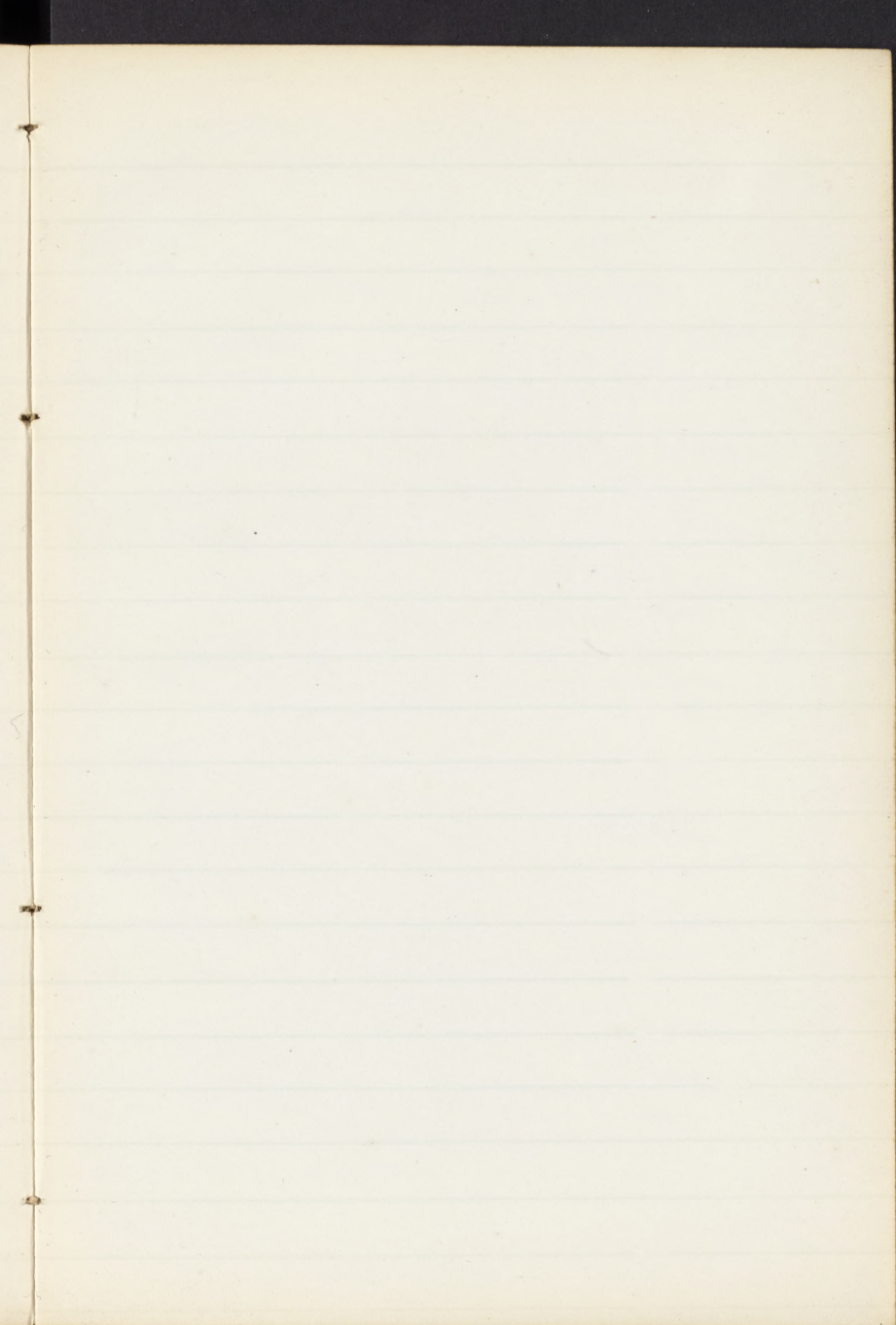


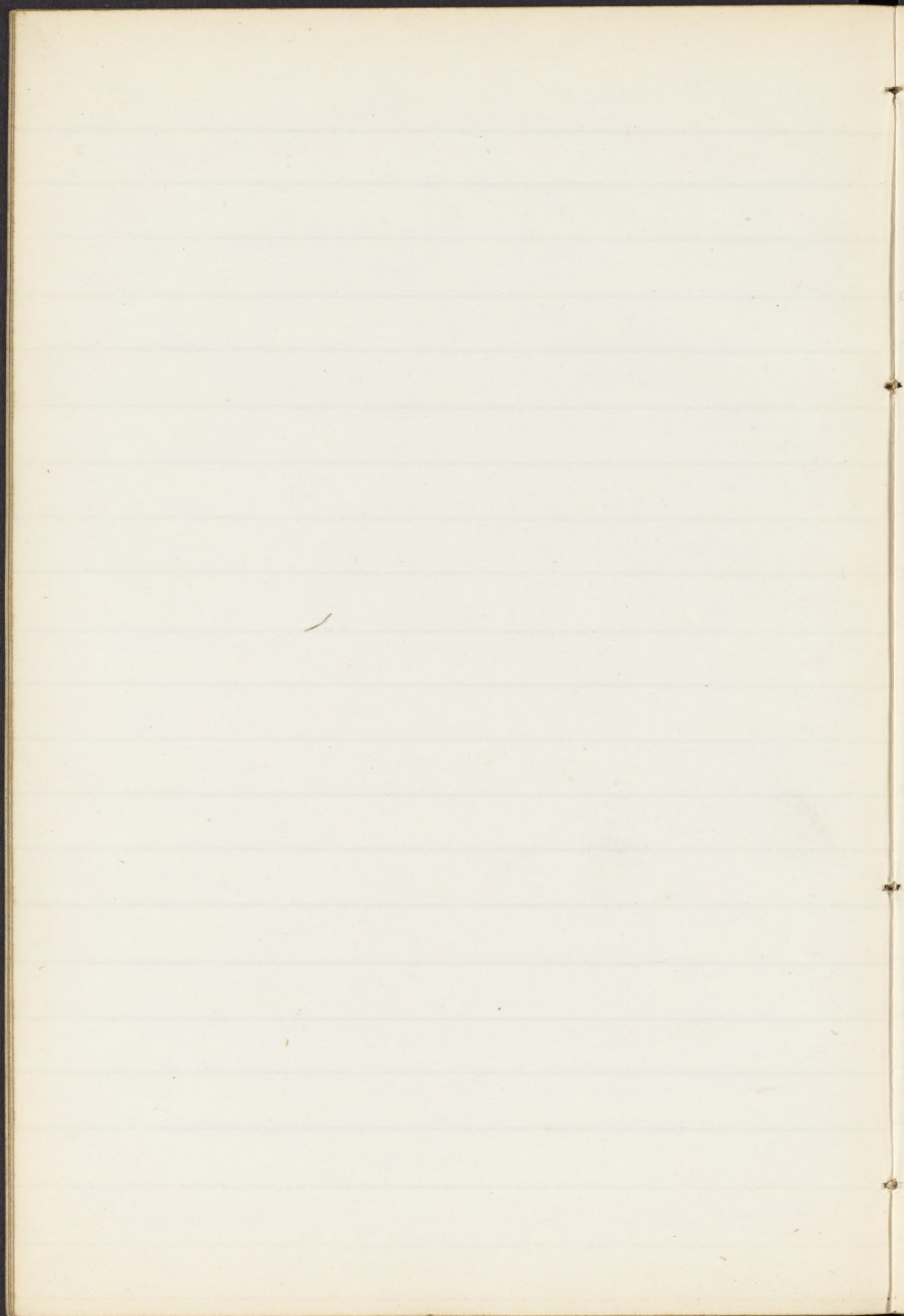


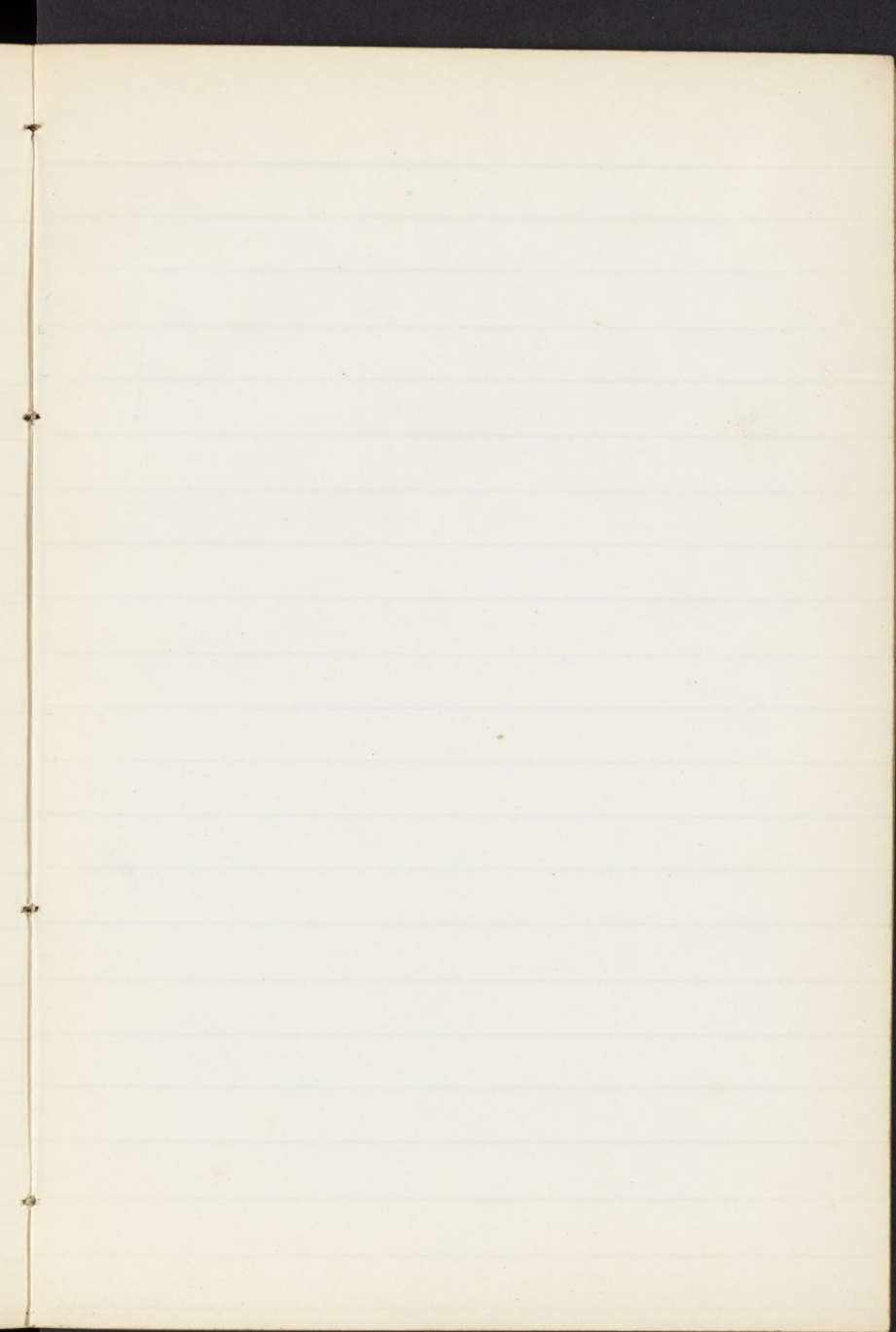


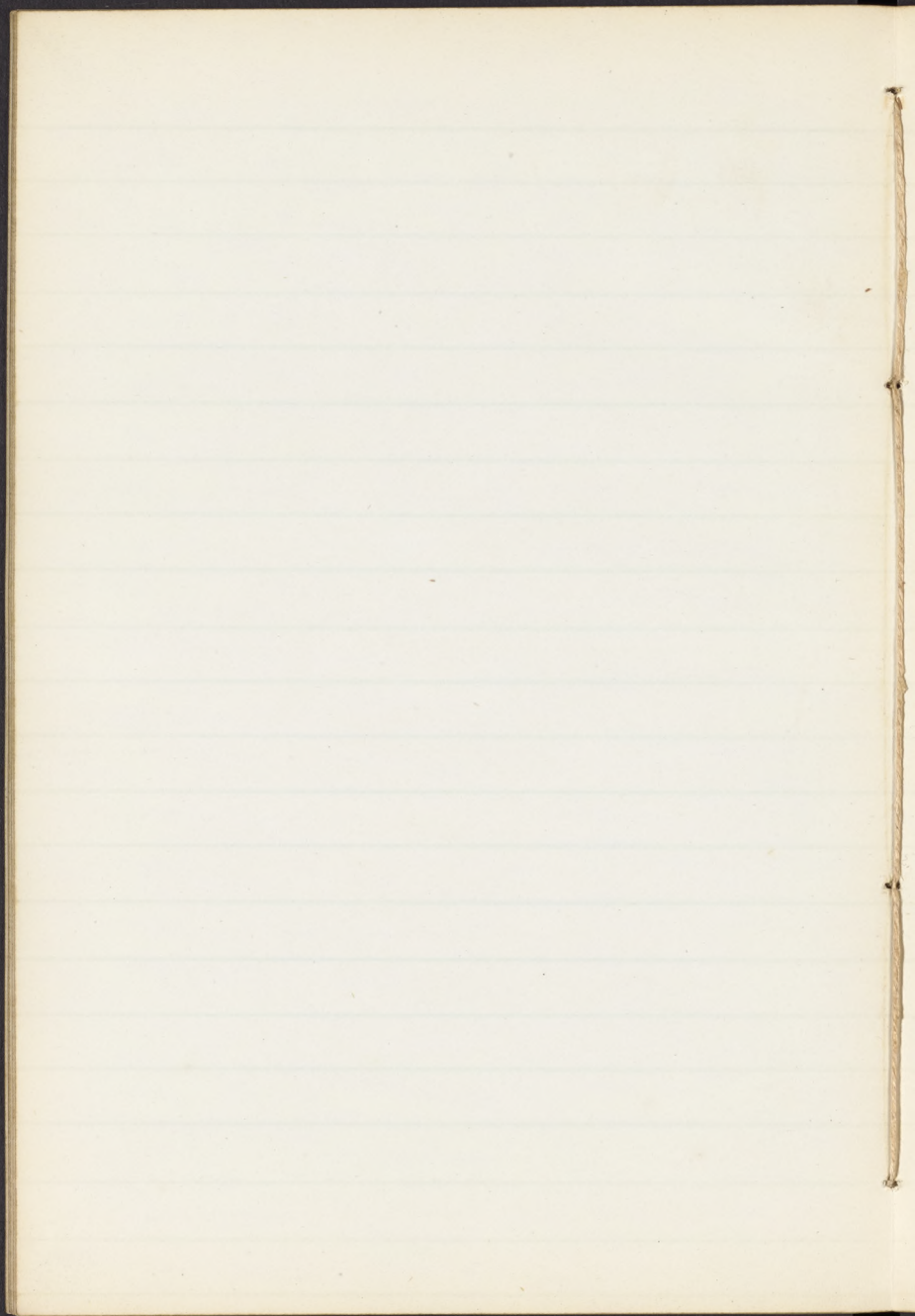


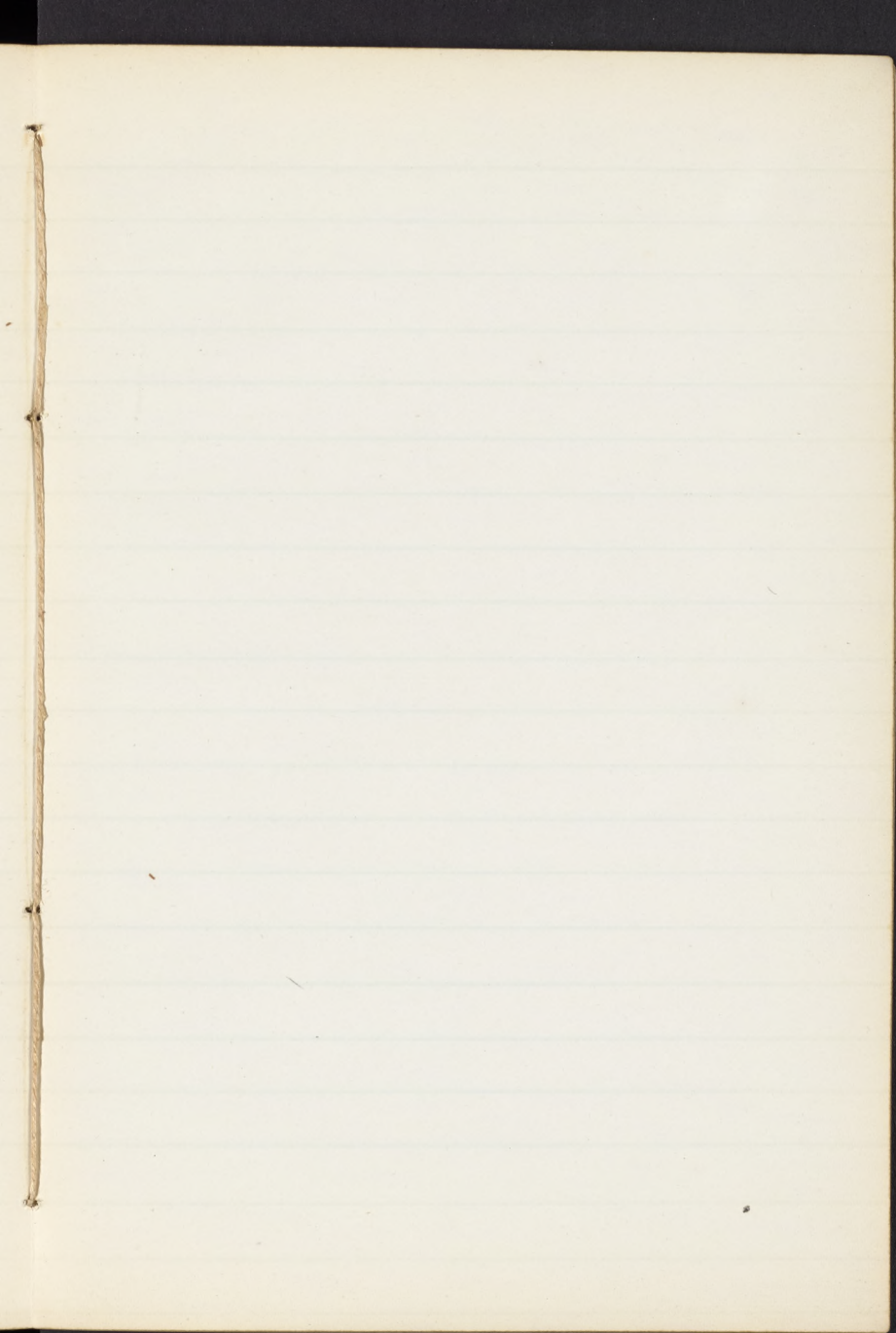


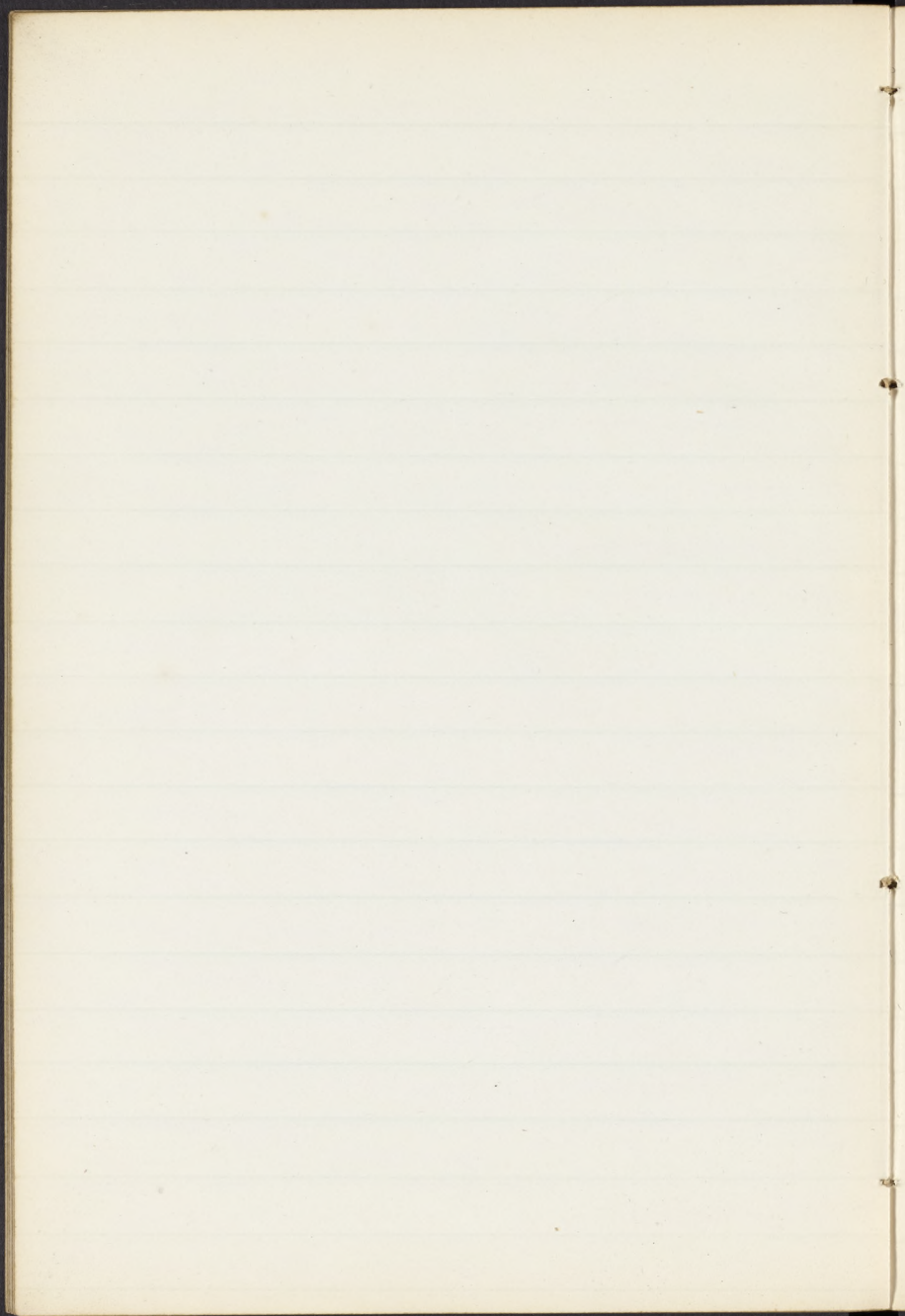


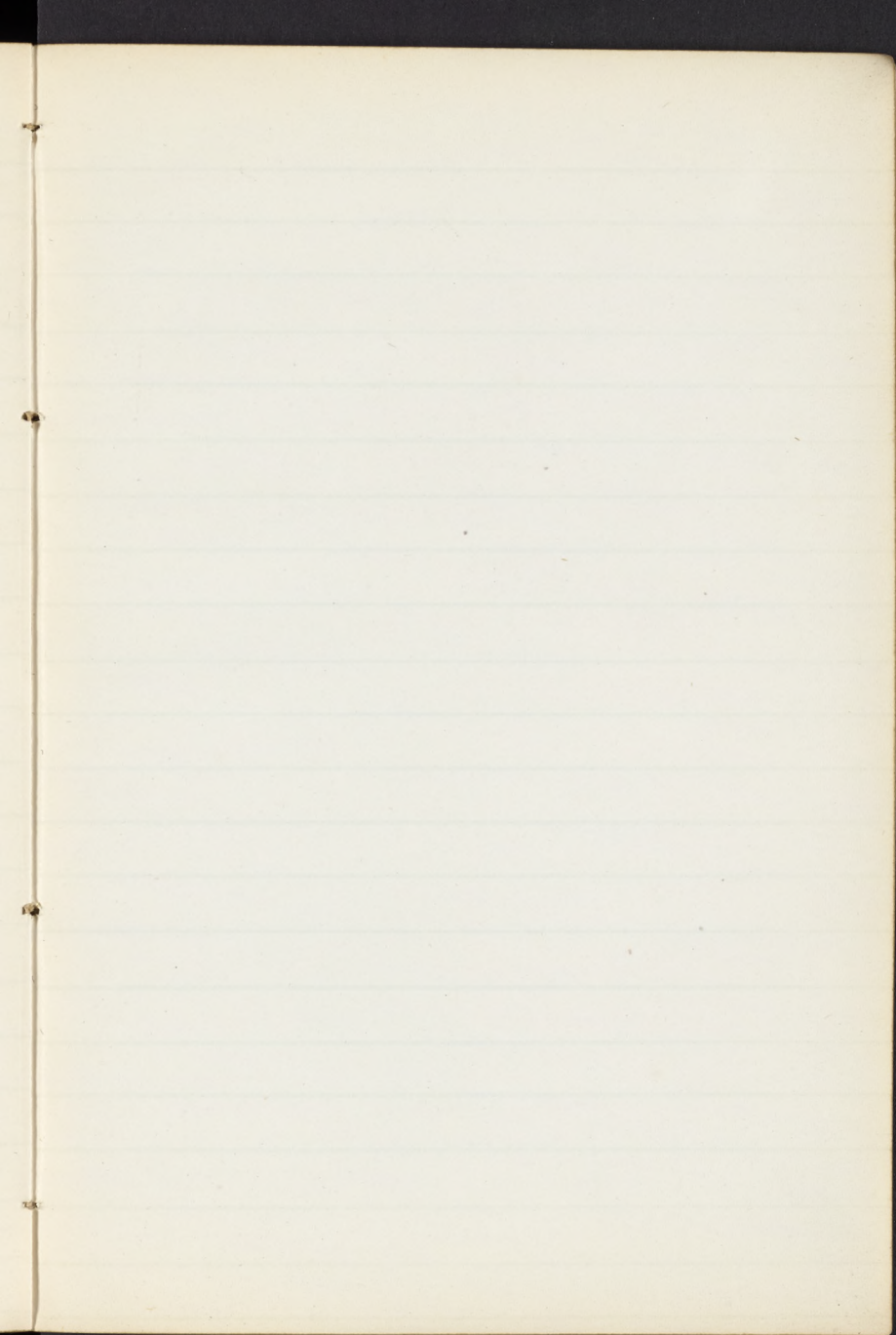


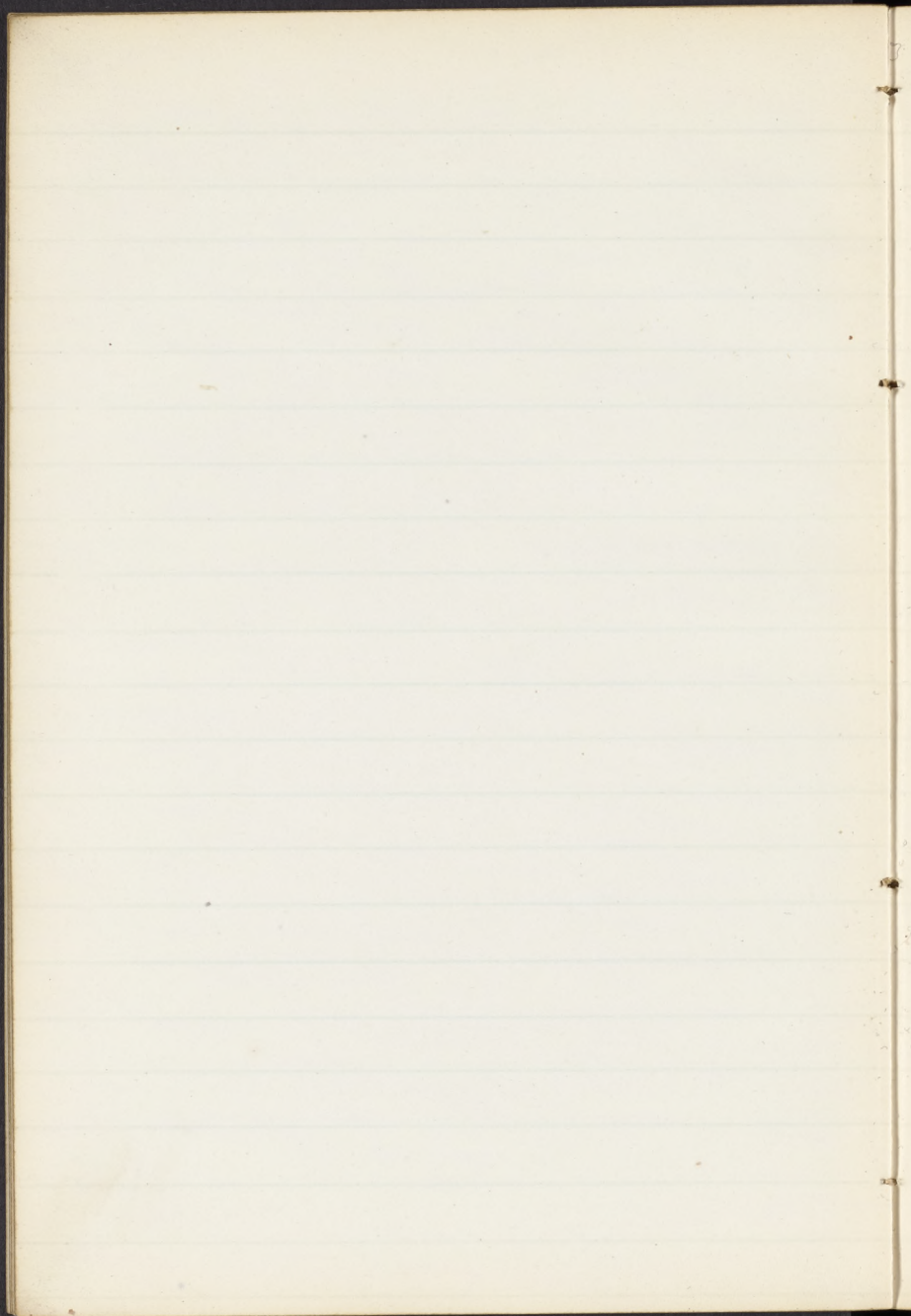


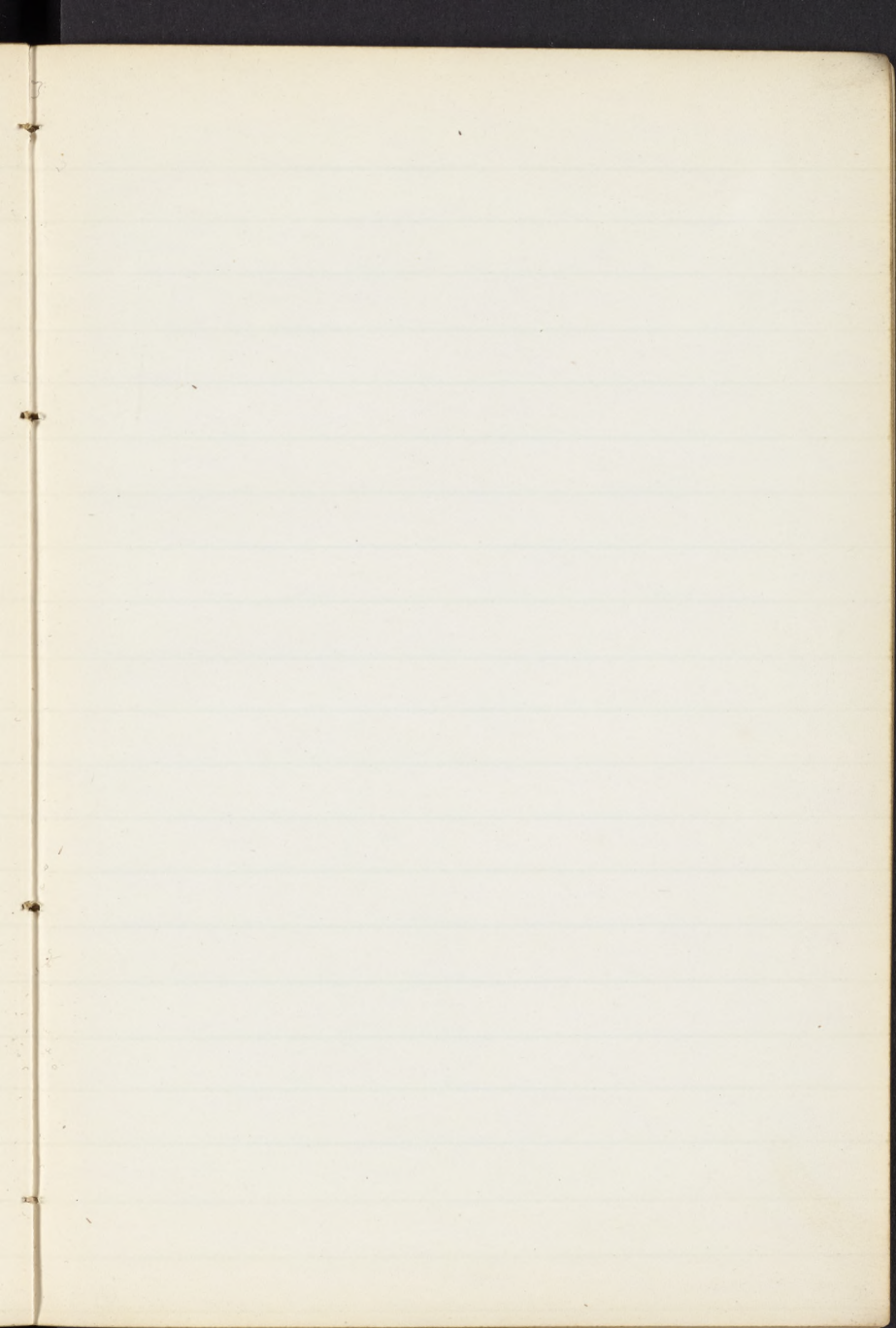


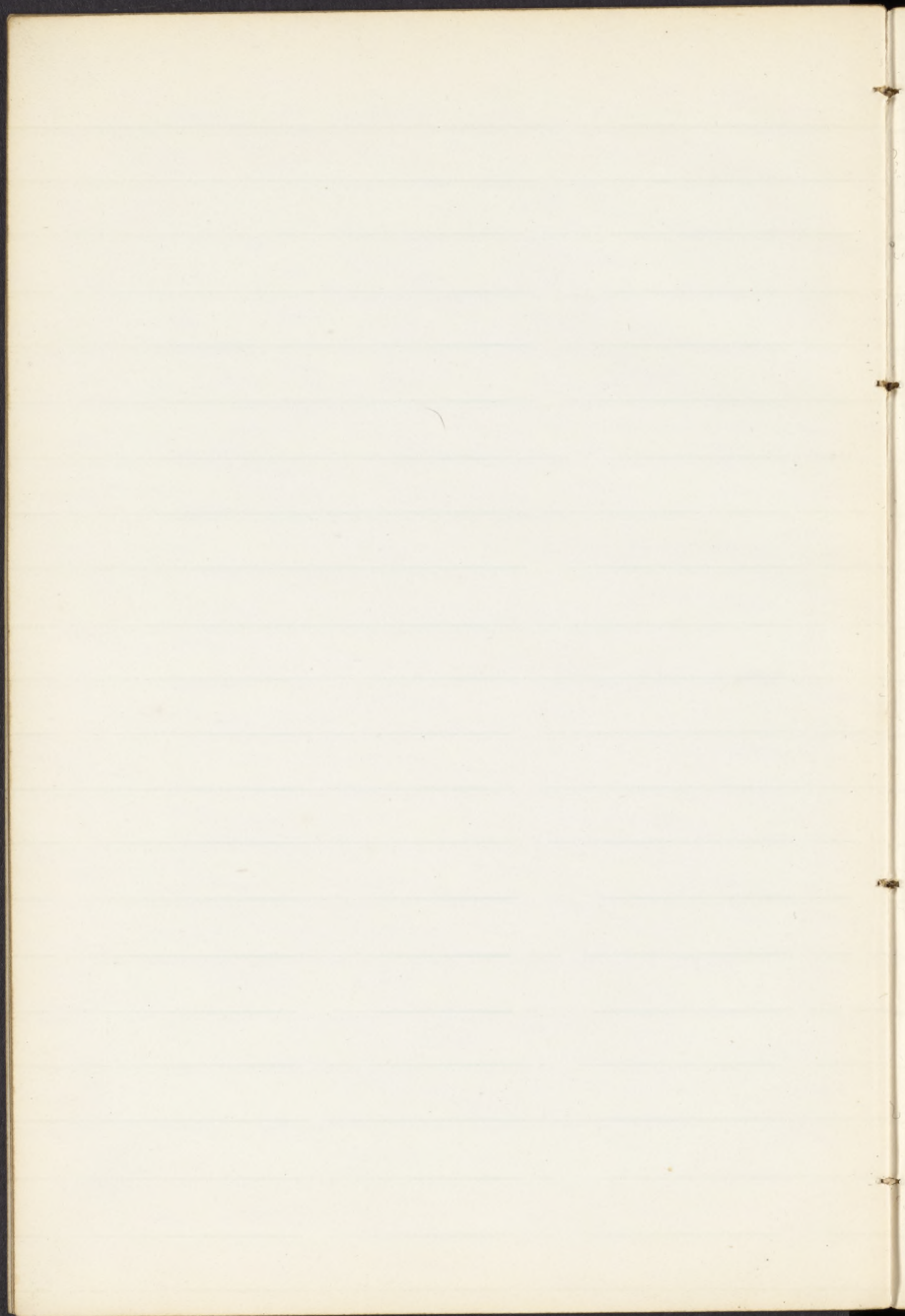


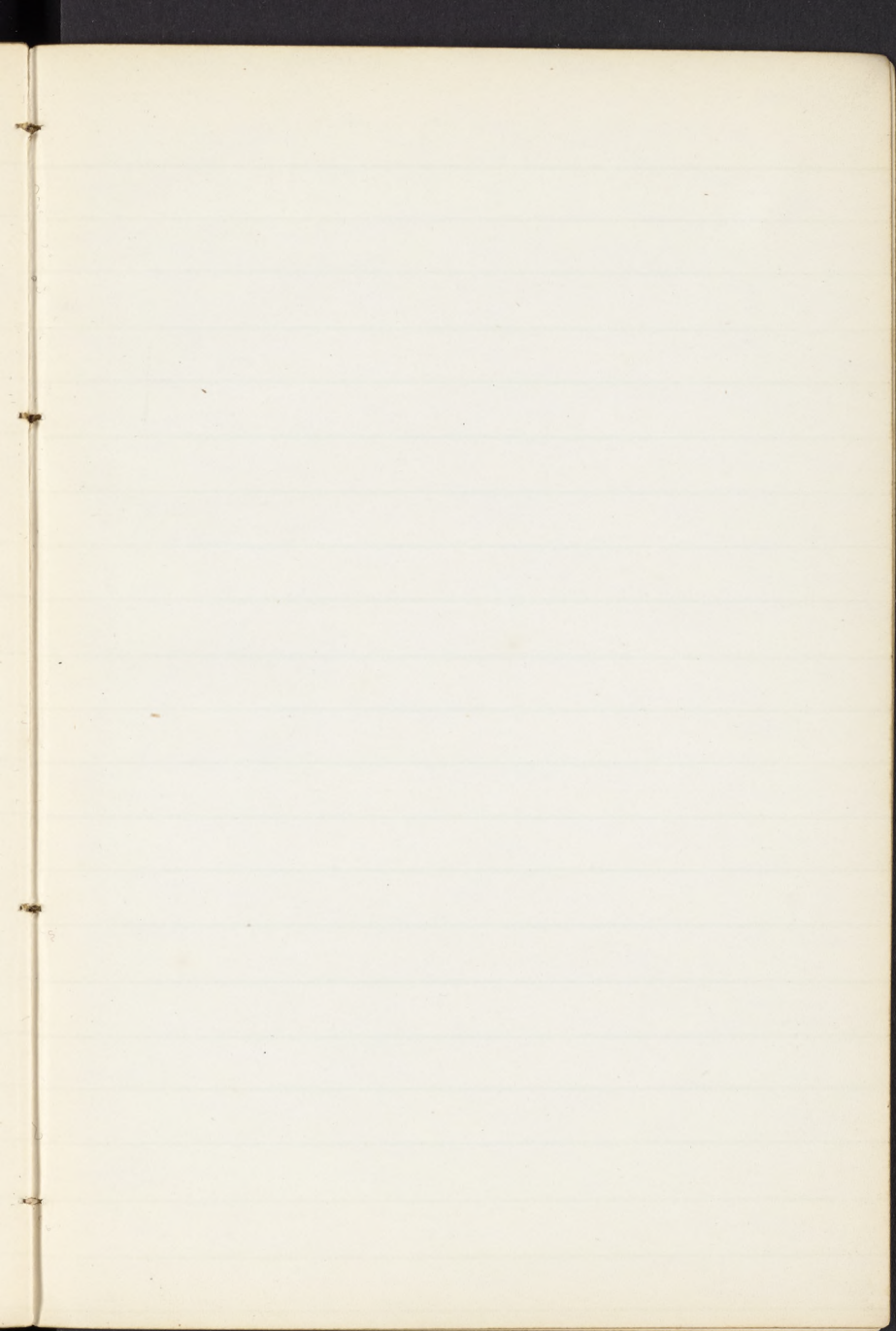


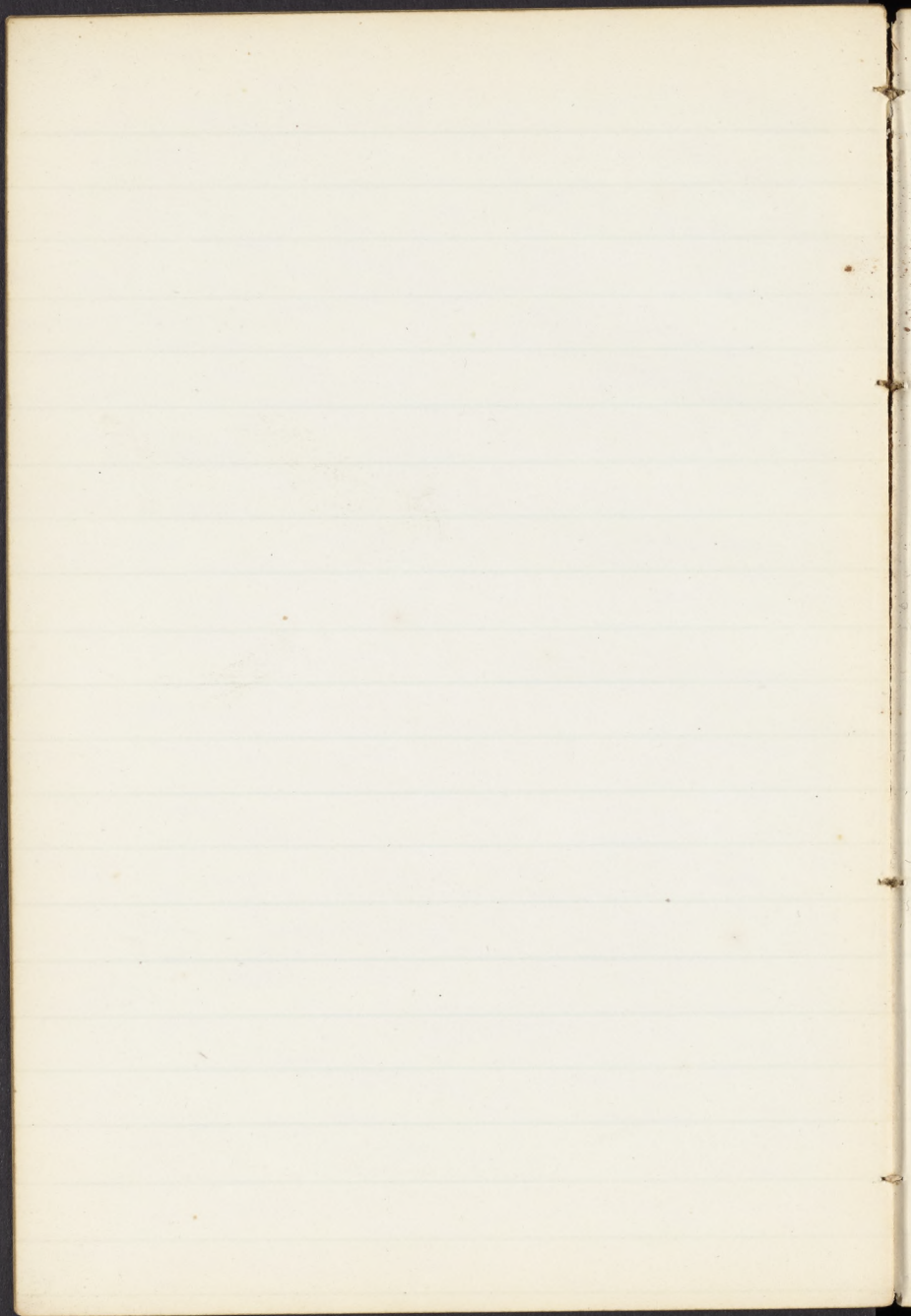


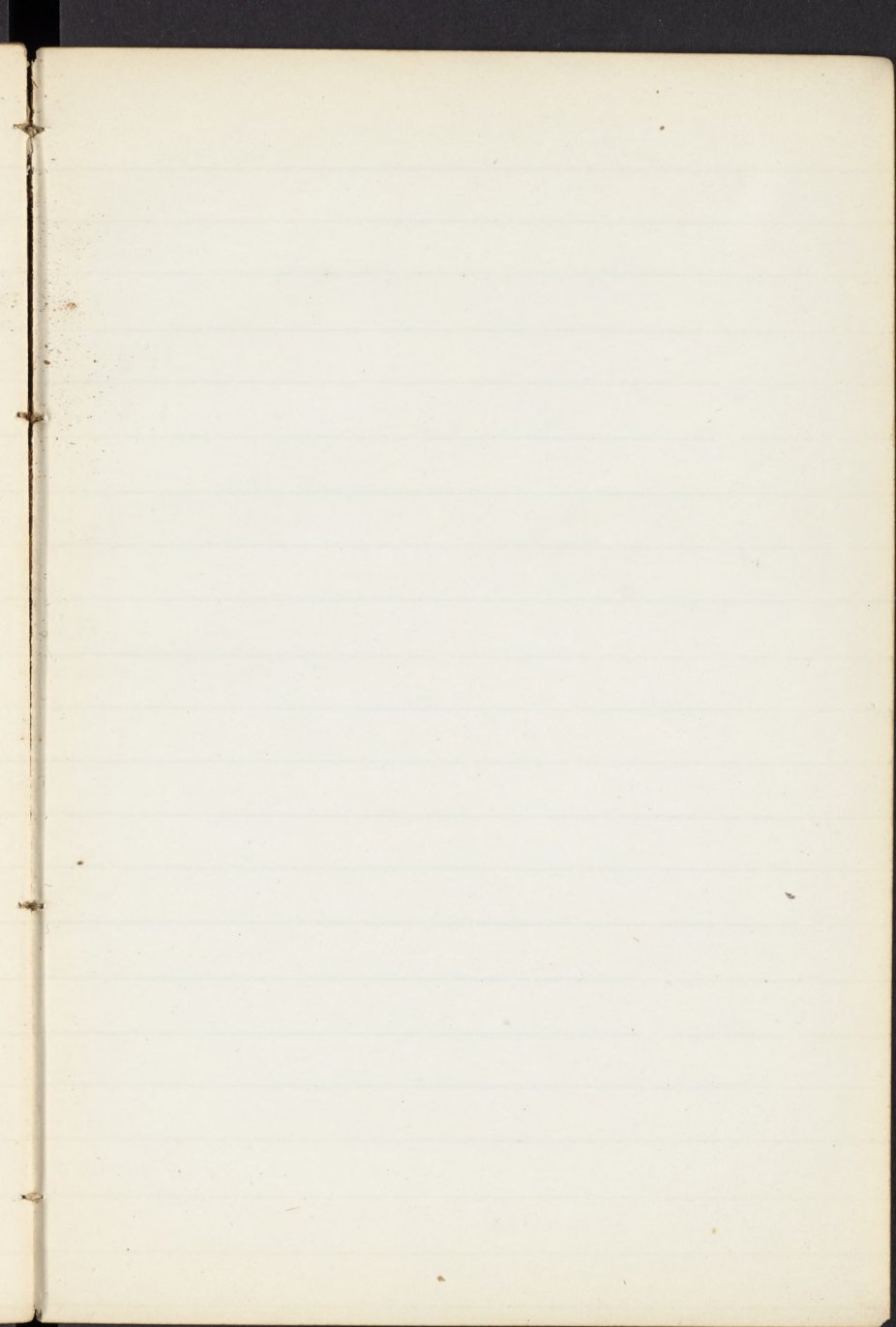


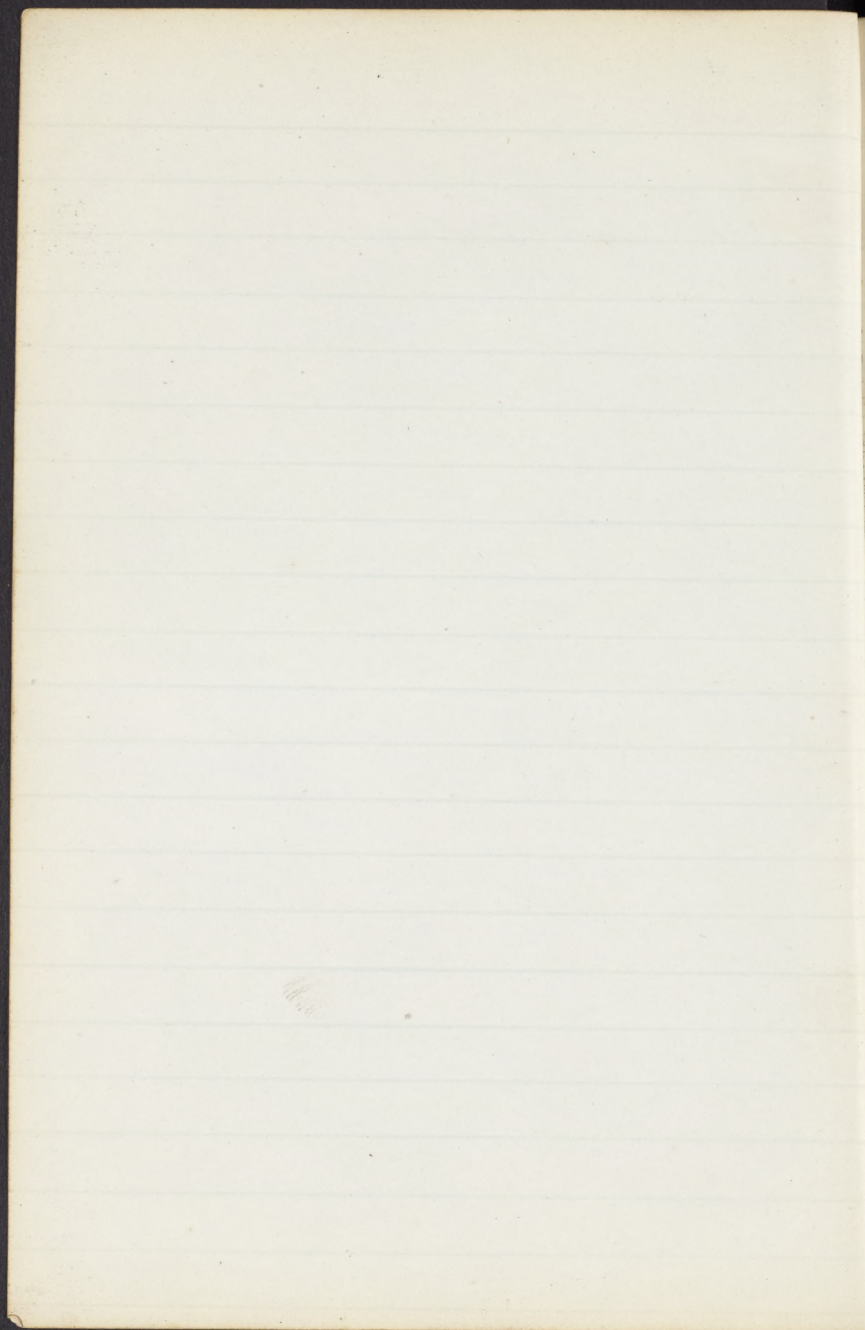


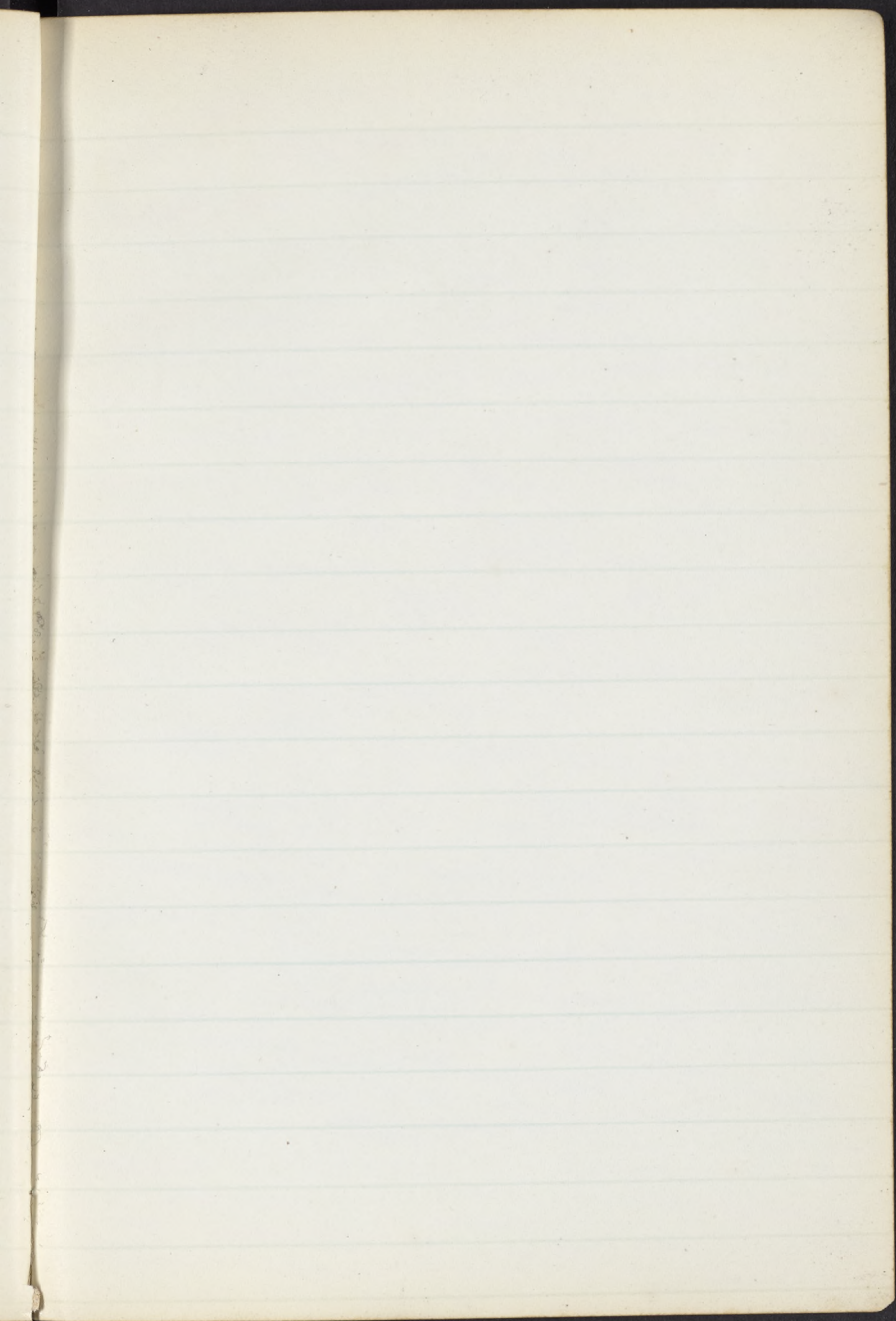


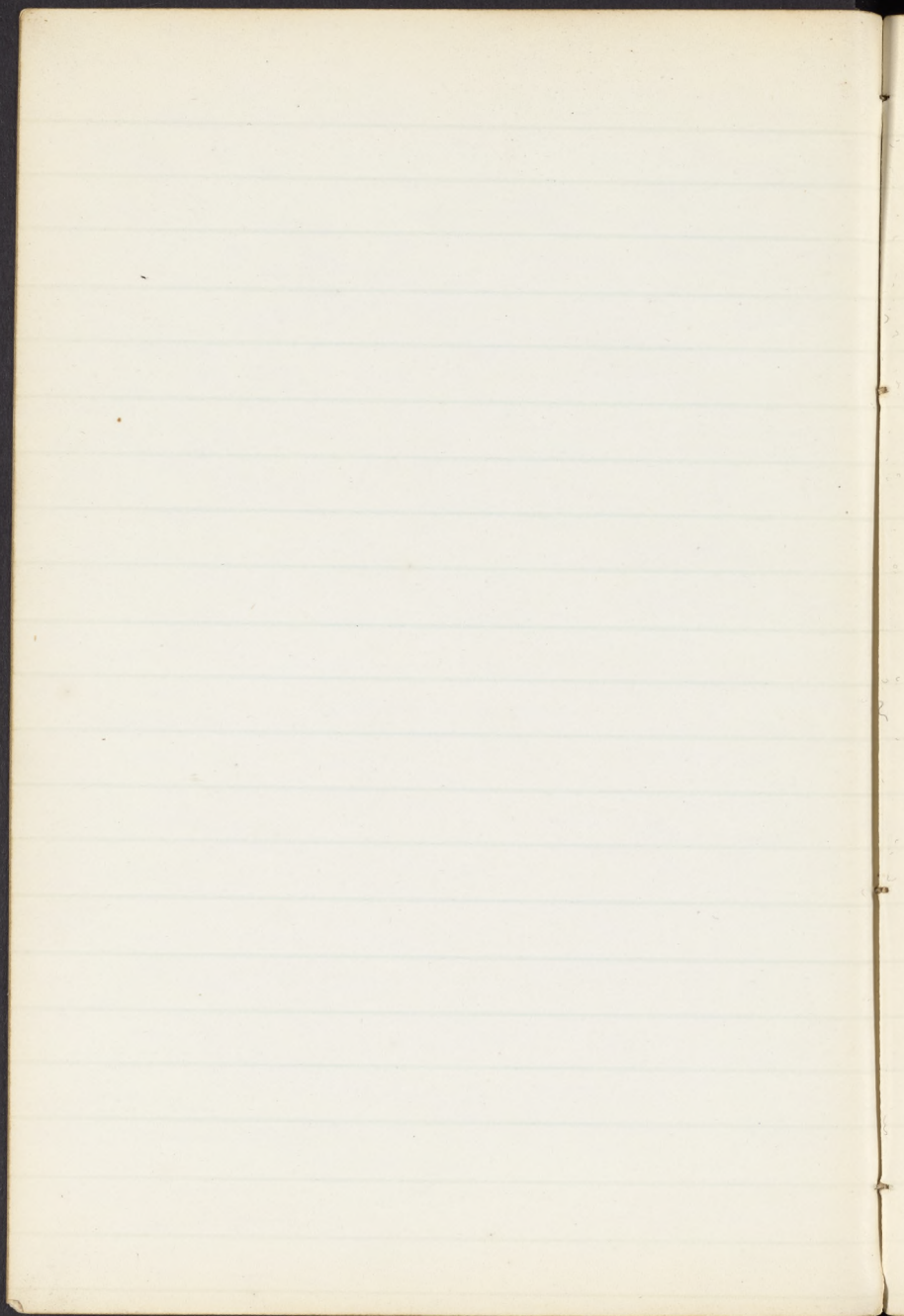


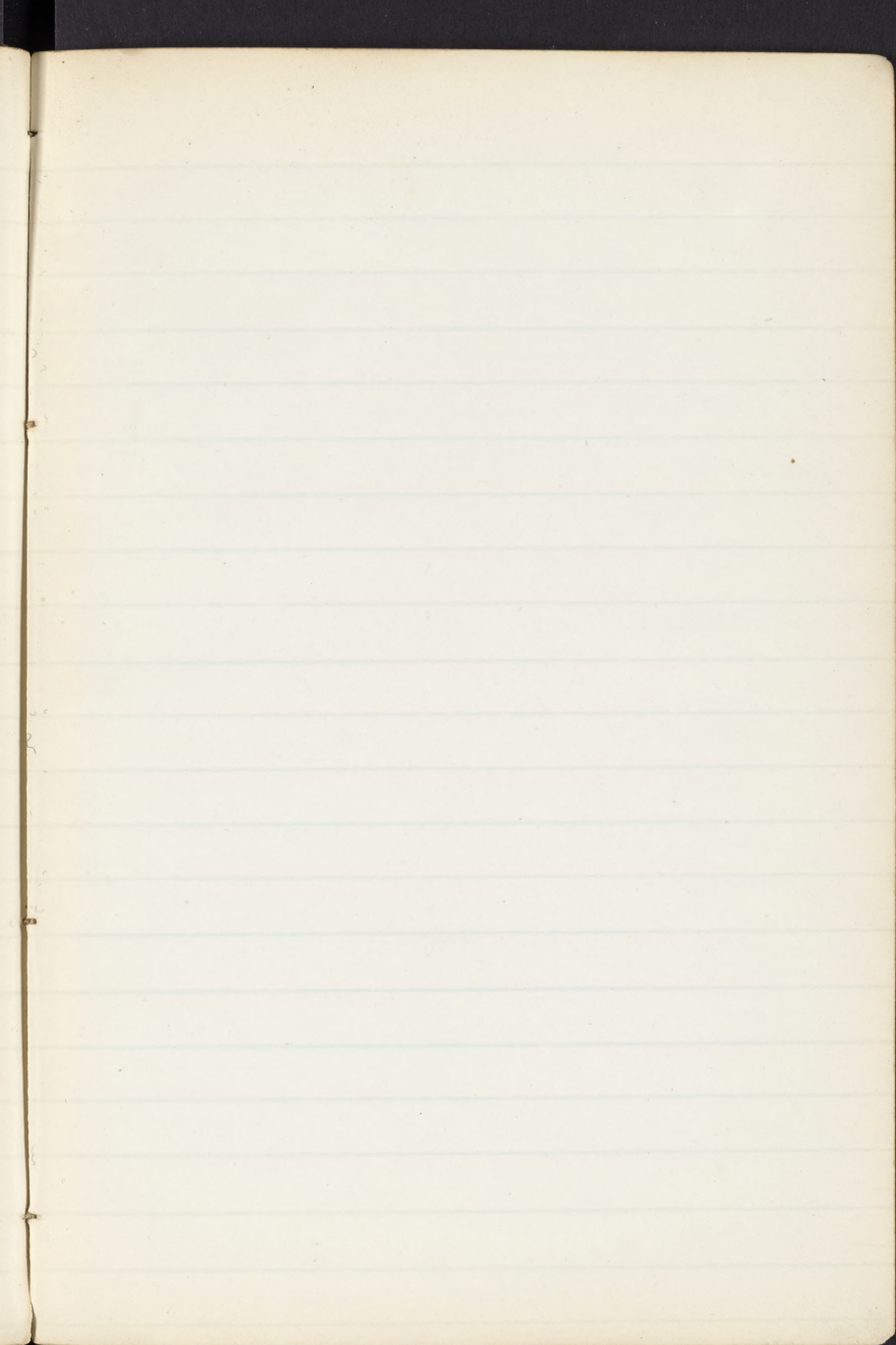


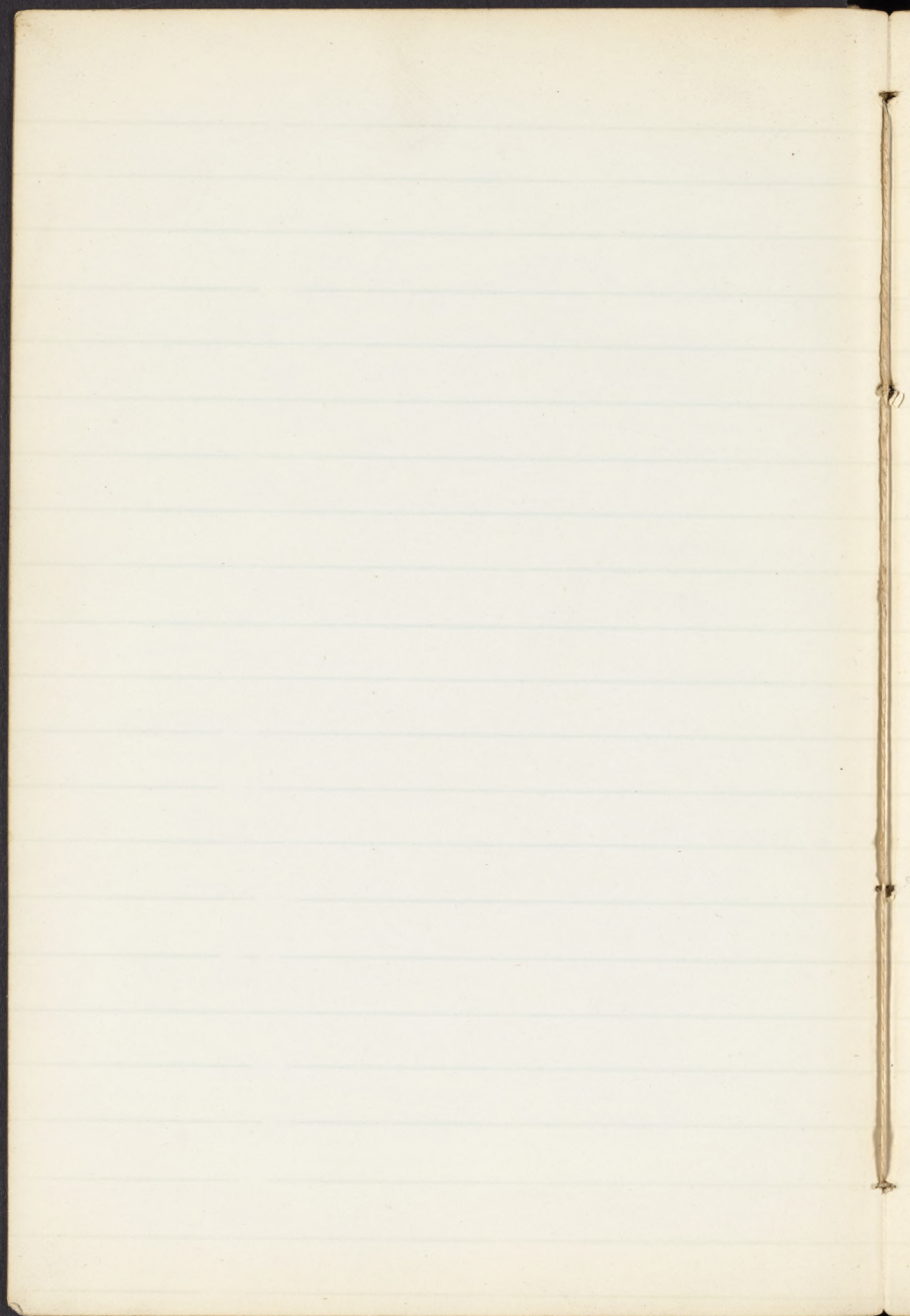


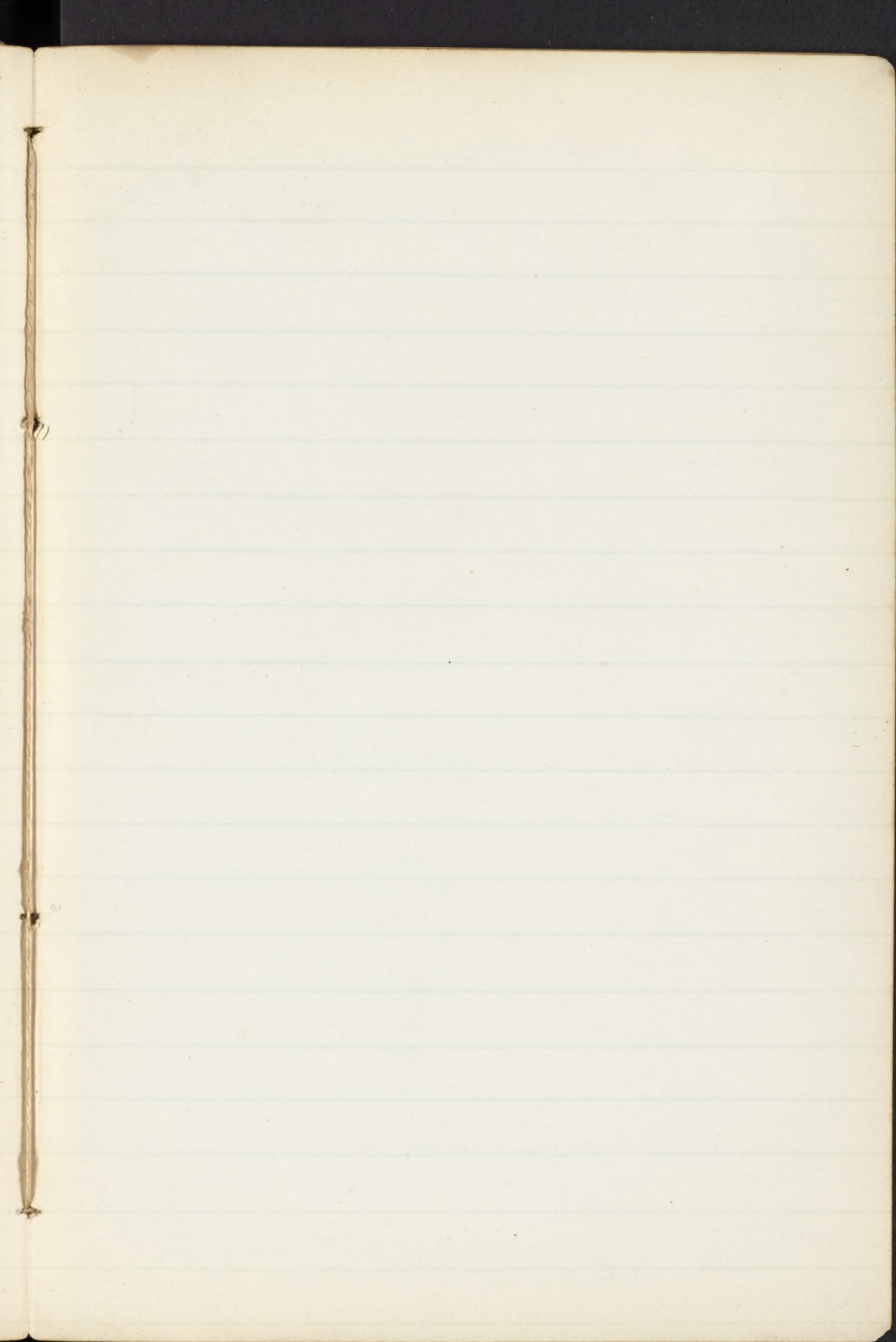


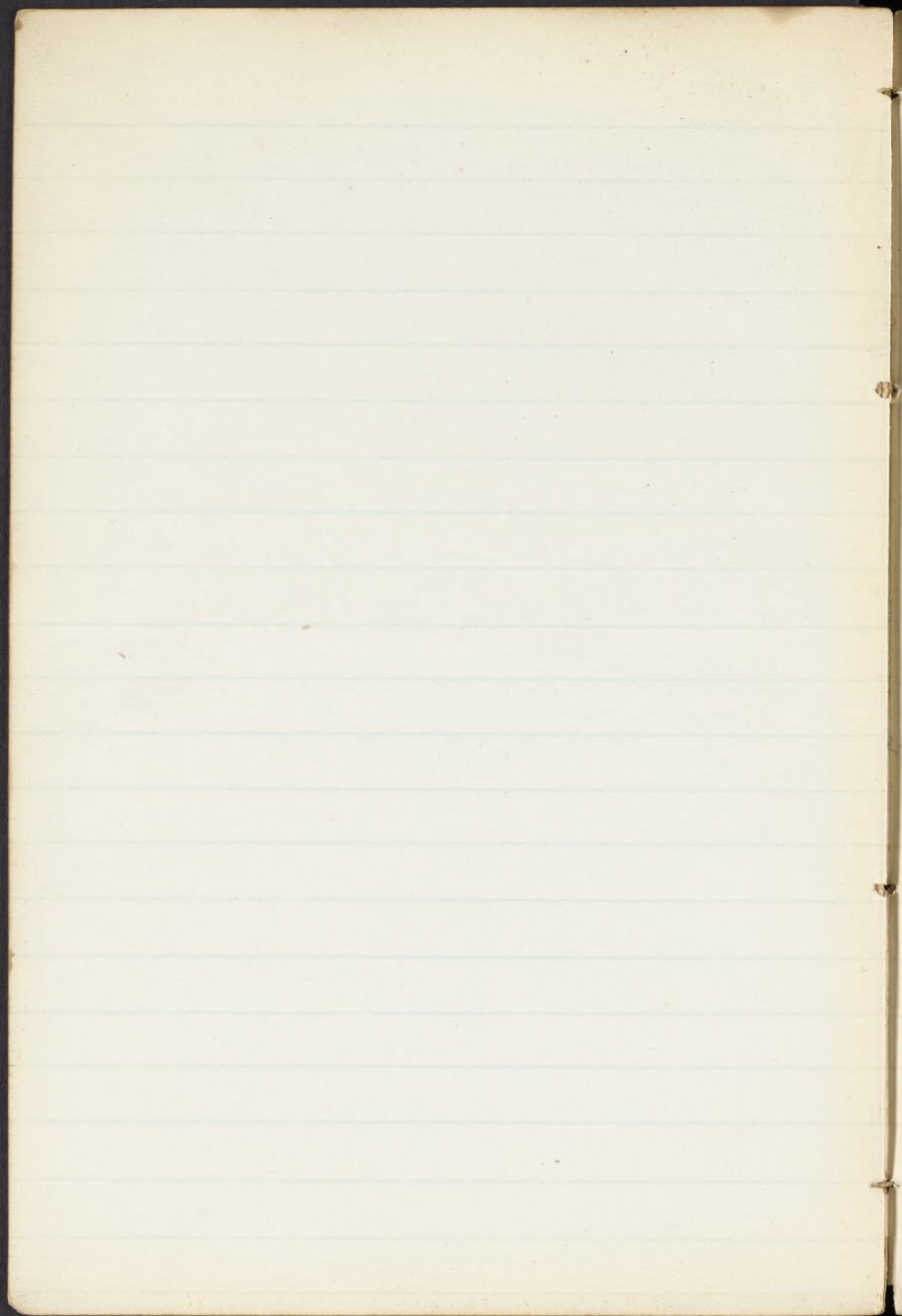


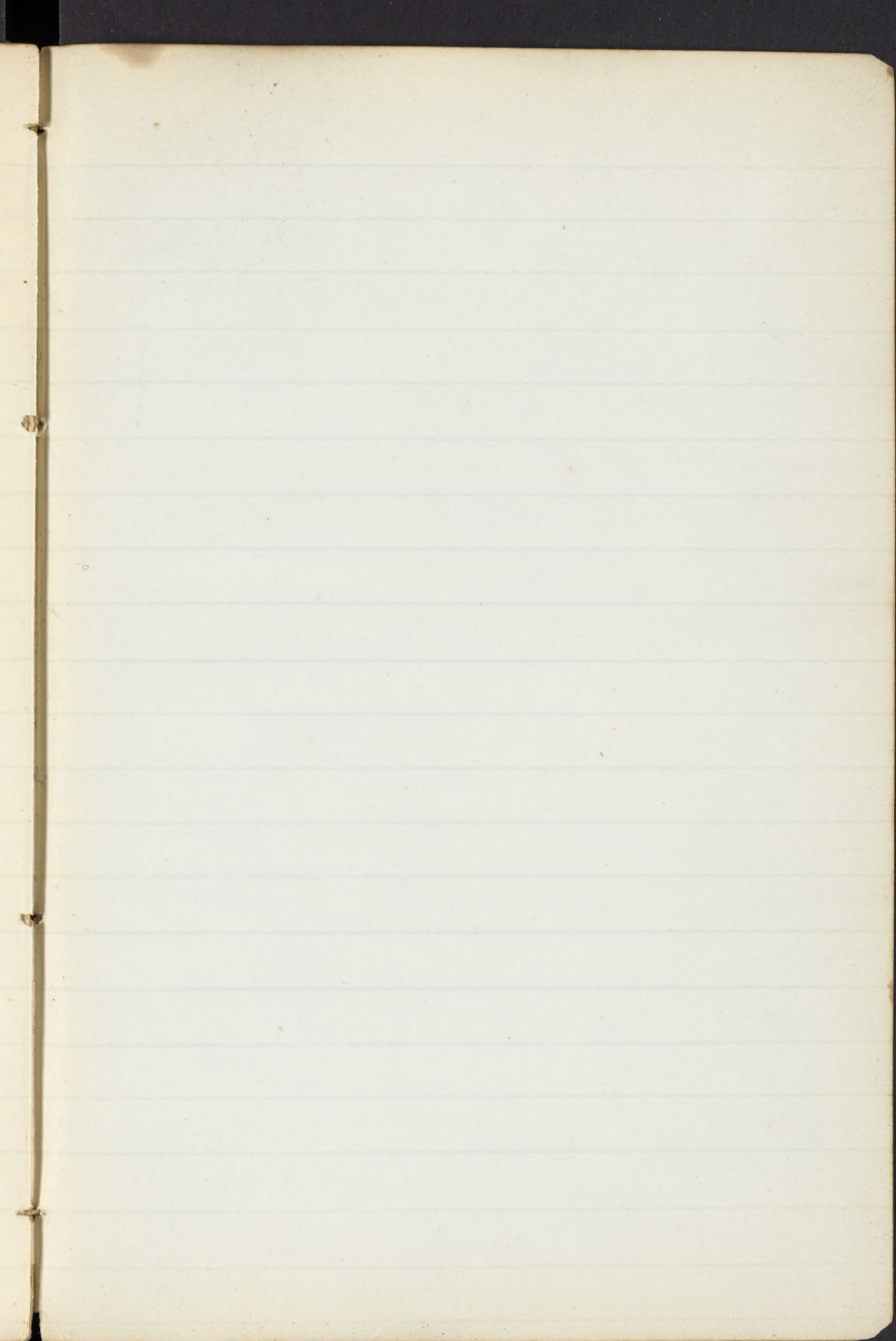


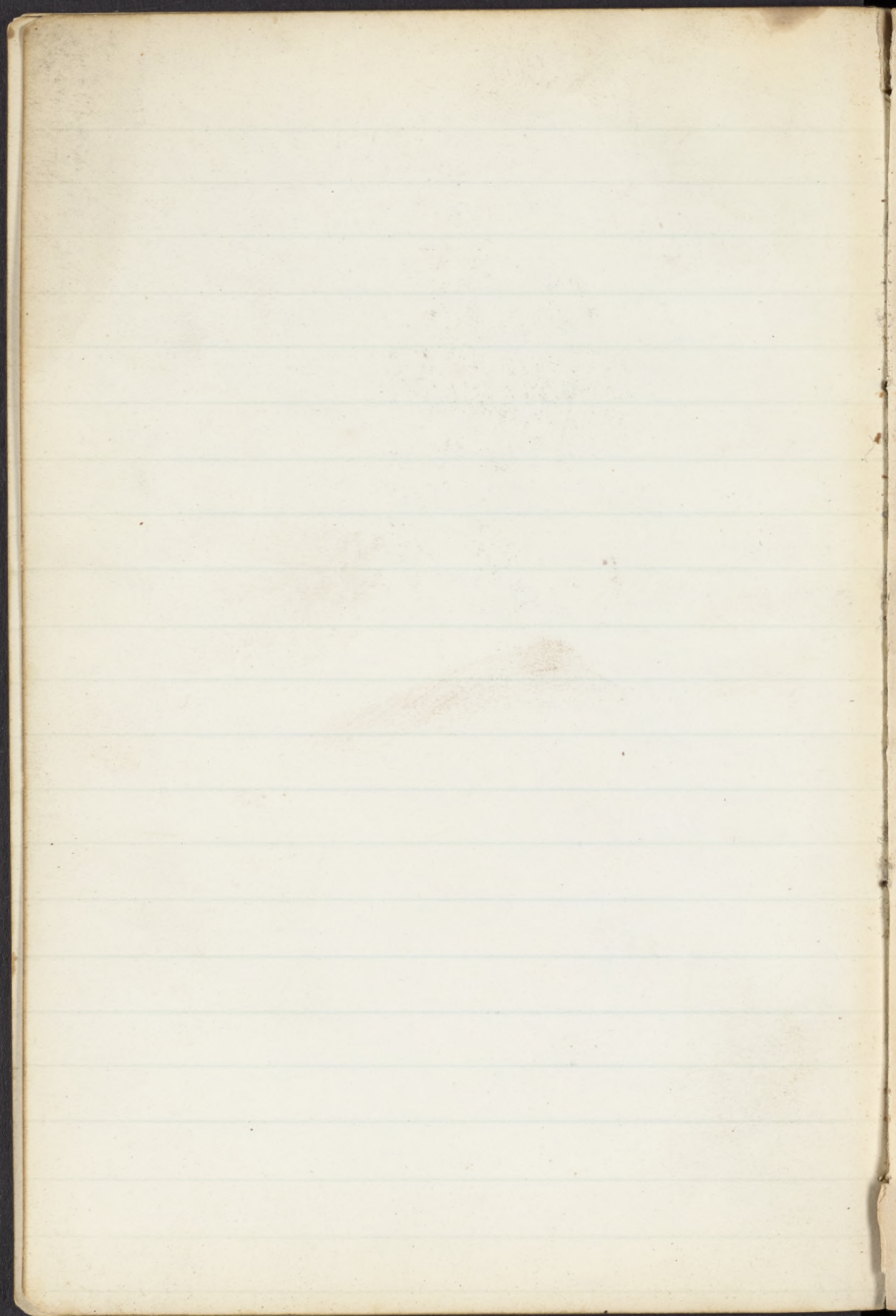


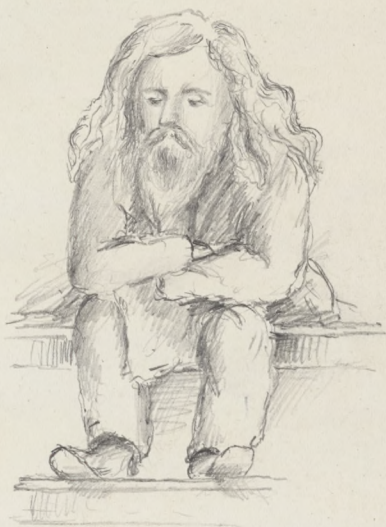












2.00	5.00
5.25	5.50
8.00	3.00
	.50
15.25	
13.50	13.50
1.75	



Pond Pump for X

Water Pump

Goldfish Egg

Small

Removes

Ne vele velis

